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PENNSYLVANIA Angler



January 1949

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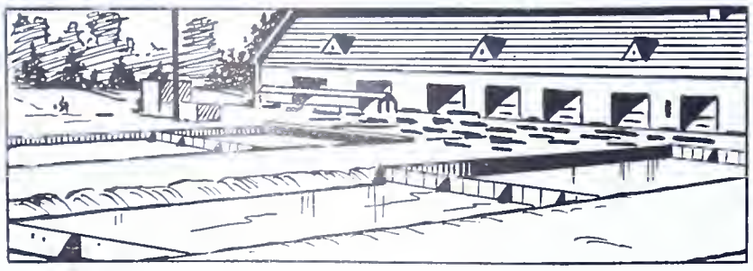
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COMMONWEALTH OF
BOARD OF FISH COMMISSIONERS
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The Angler

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is a photo made on Conneaut Lake. The perch fisherman is Bill Jackson prominent sportsman of Conneaut Lake, Pa. Credit for the photo goes to Hal H. Harrison.

Title

Inexpensive Entertainment

By Carsten Ahrens,
Summer Ranger-Naturalist
Acadia National Park

Suet may be a fat, which, when fried out, forms a tallow to most folks but to the children in our household it is the lure that brings countless birds to the elm tree by the bay window. Each winter after snow and ice make food difficult for the birds to find, we nail an onion sack holding a pound of suet to the tree where it can be easily watched from the window. We hang it well out of the reach of four-legged animals, too.

Under the suet is a box where crusts, crumbs, and other bird-satisfying table refuse is placed. When nothing else is available, even canned dog-food substitutes. Usually an ear of corn or two hang by their husks on a near-by limb.

Below us is a wooded hillside and from it we can draw quite a variety of non-migrating birds. The black-capped, black-bibbed chick-a-dees and the titmice with their pointed caps come in small flocks. The downy and hairy woodpeckers always come singly. The males of both species have red top-knots which the females lack, so the children can tell the sexes apart. Occasionally, we have a belated or extra-early song sparrow or robin. Every day a cardinal comes to brighten the scene. The nuthatch announces himself with his nasal "Yank, Yank".

The children soon recognize individuals by little peculiarities they possess. A glance at a flock of chick-a-dees will give you the impression that each is a replica of the next one. But the children look for favorites. There is "Old Twist-tail," a titmouse whose latter extremity is permanently curved in a semi-circle. "Little Baldy" is a chick-a-dee that has a couple white feathers in his black skull-cap. "Stubby" is a downy woodpecker whose tailfeathers have been worn down to what must be an uncomfortable shortness.

I used to wonder how birds could digest such quantities of a cold fat such as suet. Then a bird authority told me a most interesting fact: birds are the most warmblooded of animals. Man's temperature had better not rise above 105 degrees, but a bird's temperature can rise as high as 115 degrees without fatal results. This extra heat helps to digest the suet.

You can't get much of a toy for a quarter. The amount of good candy that that sum will purchase can be eaten and forgotten at once. But 25 cents will buy a sizable chunk of suet, and the kiddies will get your money's worth! Last Christmas I found the children leaving their toys again and again to watch the downy, the tufted titmice, and the chick-a-dees taking their turns at their winter picnic table.

Bringing Back Clean Streams in Pennsylvania

By Dr. Norris W. Vaux,

Secretary, Penna. Dept. of Health—Chairman, Sanitary Water Board

MILLIONS of dollars have been spent over the past two years, millions more are being spent and will continue to be spent on sewage and industrial waste treatment projects under requirements of the Sanitary Water Board to end the gross pollution which in some instances makes virtual open sewers of the streams. Although a large part of the Clean Streams program necessarily has to do with the planning stage—municipalities and industries being required to submit plans for treatment works—the outstanding accomplishments up to this time assure that many of the streams of this State will be restored to a condition which will make them safe for public use.

Up to this time orders have been issued to more than 600 municipalities, institutions and industries, requiring them to submit plans for sewage treatment works. Included in this number are orders to municipalities which have treatment plants but are required to provide a high degree of treatment. Orders have been issued to a like number of industries to submit plans for waste treatment works. Industries which discharge their wastes to municipal sewers are not required to submit plans since the municipality is responsible for the treatment of those wastes.

Many of the plans have been received covering sewage and industrial waste treatment works and permits issued by the Bureau of Engineering, Department of Health, which is executing the Clean Streams program. A number of sewage treatment works have been built and some are under construction. Many industries have installed and placed in operation waste treatment systems, many others are in the course of construction and still others are constantly entering the building stage.

There are innumerable instances where pollution abatement has been accomplished on a vast scale. Here the clean-up job on the Schuylkill River stands out pre-eminently as an accomplishment brought about in far less time than even many of the most optimistic thought would be possible. There were those who felt it could never be done.

That river, which serves as a public water supply for the communities along its course, including the city of Philadelphia, has for many years been the carrier of the vast tonnages of silt and small sizes of coal from the anthracite breakers. The latest estimate is that two million tons of silt and coal entered the river and its tributaries, blocking the stream and river beds. In the Philadelphia area dredging operations are carried on to keep open the shipping channels. It makes treatment of the water for public use difficult and expensive.

Under orders of the Board each of the 47 breakers located along the river and its tributaries have installed pollution abatement systems. The larger companies have installed systems to reclaim the fine sizes of coal which formerly went to the streams. Some of the installations have cost upwards of a million dollars. Other operators are recovering the smaller sizes of coal in the breakers. In all cases the silt goes to ponds where it settles out of the water, which after a given period of time enters the stream as clear effluent.

Pollution of the Schuylkill and its tributaries from silt has been virtually eliminated and an interesting phase of that abatement is that the coal companies have a ready sale for the fine sizes of coal, realizing a financial return upon that which they formerly diverted to the river waste. The silt and fine sizes of coal which has accumulated over many years will be dredged from the river by the Department of Forests and Waters. Pollution from silt having been abated, the Board is now issuing orders to the municipalities to construct sewage treatment works.

Of tremendous importance in the clean-up of heavily used waterways in the Western part of the State is the project of the Allegheny County Sanitary Authority which, because of the topography, is the most difficult engineering undertaking of its kind in the country. All the preliminary surveys, plans, tests and reports have been made on that sewage and industrial waste treatment system, which it is estimated will entail an expenditure of 82 million dollars. The Authority comprises more than 100 communities in the Allegheny County area in addition to Pittsburgh. Many industries have also joined for the disposal of their wastes.

Measurements made in the sampling and surveys showed that the daily discharge of sewage into the waterways from the area covered by the Authority, exceeds 200 million gallons a volume which would fill a basin 4(feet wide, six feet deep and 21 mile long.

Philadelphia has entered an extensive program under which sewage treatment will be provided for the entire city. The Northeast treatmen works, which will replace the presen inadequate plant, is now under con struction at a cost of about 11 millior dollars. It is expected that it will be placed in operation early next year



General view of plant under construction at Glen Burn Colliery of Susquehanna Collieries, at Shamokin for recovery of fine sizes of coal and disposal of silt to abate pollution of the stream under requirements of the Clean Streams program of the Sanitary Water Board. Shown are hydro-classifier built upon froth flotation, building and filter house in background.

Other contracts have been let entailing the construction of interceptors and sewer extensions preparatory to the construction of the Southwest and Southeast plants.

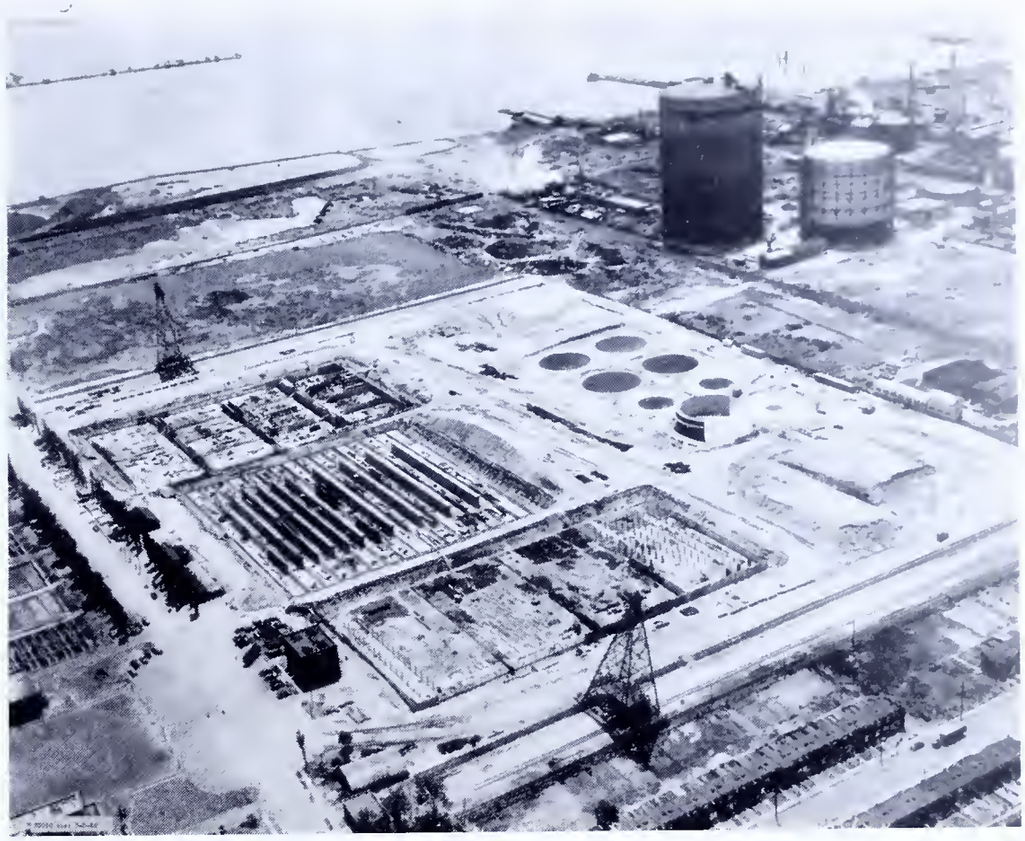
In addition to these major projects, communities and institutions in various sections of the State, ranging in population from 1,000 to 20,000, have built and are building sewage treatment works.

On the industrial front the program has reached a high tempo in all areas of the State. A number of various types of industries have been treating their wastes to some extent over a number of years but many of these are now being required to increase the efficiency and the degree of treatment. Many steel mills and distilleries are in this catagory as are a number of oil refineries. All the tanneries outside the larger communities where they discharge their wastes to city sewers, have waste treatment systems, but they too are being required to provide for higher degrees of treatment where the job being done does not come up to the requirements of the Board.

It was determined that advancement of the Clean Streams program could be greatly facilitated by the setting up of waste treatment standards on an industry-wide basis in those cases where the wastes were of the same character and therefore the same principles of treatment could be applied. This was done in the case of the milk industry, the standards adopted by the Board having been arranged through conferences of the Bureau of Engineering and a committee of that industry. The same course is now being followed by representatives of the steel industry for the treatment of pickling liquors used in the process of the manufacture of steel, and by representatives of oil producers for the treatment of wastes at oil wells.

In an effort to determine if it is practical to supplement the present method of measuring the quality of water in the streams upon which abatement requirements are based, the Board has arranged with the Academy of Natural Sciences of Philadelphia to conduct an experimental survey based upon the ability of the waterway to support certain forms of biological life. The project, the first to be conducted in great detail anywhere, is now under way on the Conestoga Creek in Lancaster County. The report will be made to the Board by the end of this year.

The theory upon which the new method of measuring stream water quality is based is that since certain forms of biological life can survive in streams polluted to a degree which will not permt other forms of animal and vegetable life to exist, the new study will permit a determination of the degree of pollution abatement which will be necessary to meet the requirements of the Board. By determining which groups of organisms are present in waters containing various degrees of pollution, it is believed it may be possible at any time, by sampling the waters for types of life which are present, to learn to what extent wastes discharged to the stream are causing pollution.



Aerial view of construction of Northeast Sewage Treatment Works, Philadelphia, showing vast excavation and foundation work involved in building primary settling, aeration, final settling and sludge digestion tanks.

If the new method proves practical it is expected that it will be used as a supplement to the present measuring method which revolves largely around the determination of the amount of oxygen which is available in a stream to neutralize acid and alkalies, render harmless toxic substances, and to dispose of other harmful materials.

Under a contract executed and approved by Governor James H. Duff, a comprehensive study of the pollution of the Clarion River which flows through a highly potential recreational area including the famous Cooks Forest, is being made by Camp, Dresser and McKee, noted consulting engineers of Boston, Mass. The study will include the amounts and kinds of polluting wastes being discharged into the river by the paper mill of the New York and Pennsylvania Co., a determination of the maximum extent to which the pollution can be reduced, and the extent to which the company is now treating the wastes. The study will also include pollution caused by other industries along the river and its tributaries.

Treatment of acid mine waters is one of the hurdles in the Clean Streams program yet to be made since there is no known practical method for the treatment of those waters. Under a fellowship established by the Board, Mellon Institute, Pittsburgh is conducting research into this subject. The research is divided into two phases, one to find the effect of acid mine waters upon sewage and another to find a method for the treatment of acid mine waters.

Extensive work is being done in the Southwestern section of the State in making surveys in the acid mine diversion phase of the program. Unless the Board fails to issue a permit within one year, application might be made for a mine operation, the drainage may not be diverted to a clean stream. If the stream to which discharge might be made is of sufficient importance the Board may provide a diversion system at State expense. The studies and surveys being made in the Western area involve to a great extent the Virgin coal fields in Washington and Greene counties where plans are already being made by coal operators to extend production in those fields.

The Clean Streams program of the Sanitary Water Board is not only comprehensive, but it involves many complexities. Over the years some waterways have been turned into sources conveying filth and many times are referred to as vile sewers. Ninety percent of the population of this State pro-

(*Turn to Page* 15)

Fly Tying

By Donald S. Shiner

Wet, Dry, Streamer Flies and Bass Bugs

TODAY there is an estimated 4,000,000,000 flies of all varieties tied in the U. S. Fly tying has become one of the most fascinating and profitable hobbies of our time. While it is not essential to know how a fly is constructed or be able to tie one in order to fish them properly, there can be much satisfaction derived from constructing a fly and under actual stream test be the cause of a good number of fish creeled.

Artificial flies, tied by the fly-tyer, are among the best known methods of taking fish. Not only trout, as generally believed, will take a fly, but bass, salmon, all the species of trout, pike and pickerel, and the many varieties of pan-fish. Not all will rise to the dry fly but will strike at flies designed to imitate minnows, under water creatures, such as nymphs, drowned insects and torn particles of food.

There are numerous text books on the subject of fly tying available on the market today. Each is an authority on the subjects with little variations of procedure. While it is possible for the authors to go into extensive detail in the fly's construction and materials used, an article of this nature must be condensed and only the major highlights can be touched upon in order to give the novice a fundamental knowledge in this ever growing business or hobby.

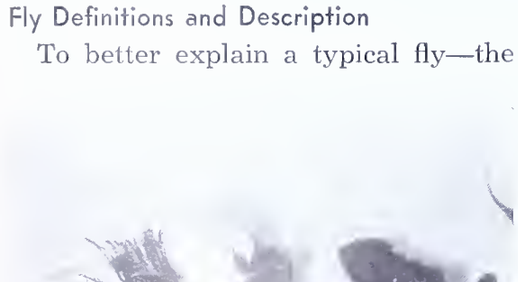
To fully clarify fly tying, we can divide the subject into four main parts: definitions of a fly; materials used; tools; and the actual tying operations.

Each type fly is different in its finished appearance, but basically, each fly is tied the same, using identically the same steps and procedure.

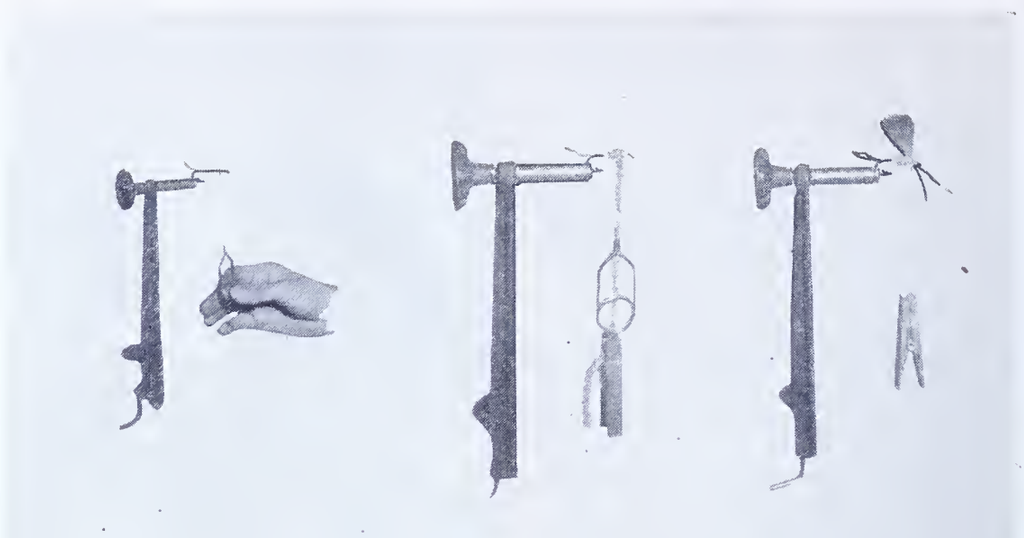
Materials used vary greatly and are directly responsible for the finished fly.

Fly Definitions and Description

To better explain a typical fly—the fly is broken down into parts and defined:



Tying flies require only a few tools and a small variety of materials.



Procedure for tying big bass flies. Note hook is held securely in vise as when tying all other type flies. After tail is tied securely, body material (chenille being used in photograph) is wrapped around to form body. Then large feathers from the breast of a duck is tied in as wings. Next step is to tie in hackle feathers and fly is complete.

Body: Material covering the shank of the hook (area between eye and bend of hook) and resembles the body of an insect. Generally it is made of wool yarn, floss material, quills, chenille, tinsel, spun fur, or gum rubber.

Wings: Small segments of feathers placed near the eye of hook to represent the insect's wings. Sections of feathers from a duck or other fowl's wing or breast feather, tip of hackle feather, fur, or plastic material are used.

Tail: Made from practically everything used for wings as well as fibers of golden and Lady Amherst pheasant tippets, rabbits whiskers, etc.

Ribbing: In the case of a ribbed fly, gold or silver tinsel, thread, horse hair, floss, hackles, etc., are used.

Shoulder: Made either of feathers, hair or fur material. Most popular material used on streamer for shoulders are jungle cock neck feathers, or imitations made of a plastic composition.

Tail Ruff or Egg Sack: This is a bump at the base of the tail made of chenille, peacock tail fibers, or wool yarn.

Throat: Material tied in the fly at the base of the eye of hook to represent the 'gills' of minnows. In the case of a streamer fly, it can denote blood or a bleeding minnow.

Hackles: The neck feathers found on cock birds (domestic roosters). This feather is wound directly behind the eye of the hook and produces the fingers or fibers projecting outward, which support the fly on the surface of the water as in the case of a dry fly. Also used as a ribbing material—when wound over the body—this is called palmer tied.

Those are the most prominent terms or parts of a typical fly. While there are a few others, they merely over-lap the parts defined and are not necessary to understand the fly's construction.

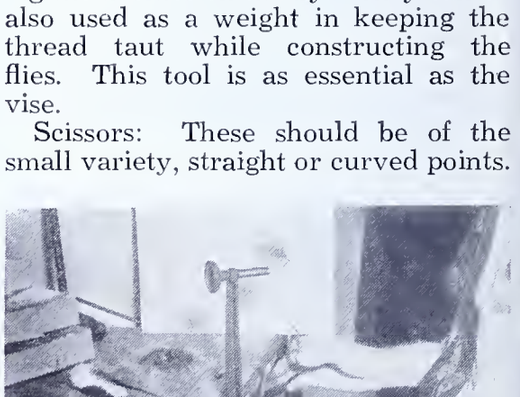
Tools

As in all trades, good tools are essential. The proficient fly tier needs tools of good quality as well as the knowledge of fly definitions and materials. The bare essential tools and equipment for fly tying are:

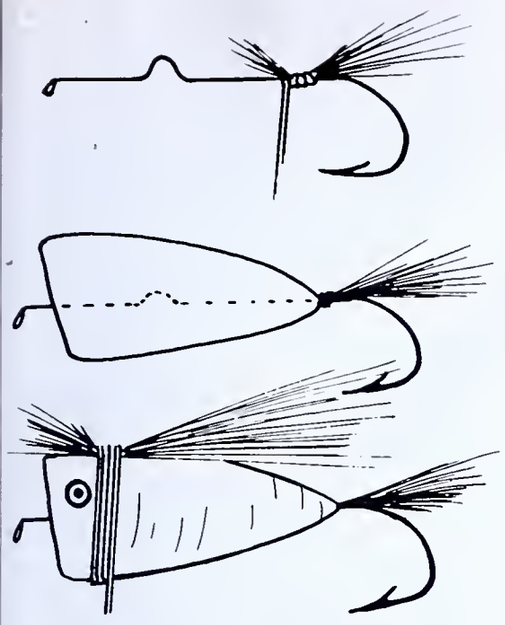
Vise: The most important item of the fly tying equipment is a good sturdy vise. There are many on the market today and most all work equally well. It is merely an instrument having jaws in which the hook is placed and clamped. This enables the tier to work with both hands.

Hackle Pliers: Used to grasp tip or butt end of hackle feathers when winding the hackles on the fly. They can be also used as a weight in keeping the thread taut while constructing the flies. This tool is as essential as the vise.

Scissors: These should be of the small variety, straight or curved points.



A desk in some corner of the room is an ideal place to tie flies. Proper light is a must to avoid unnecessary eye strain. Once material is layed out in front of tier, tying a fly is only a matter of minutes.



Steps in making a bass bug. Figure (1) tie tail material to a 'hump' shank hook, (2) shape body from cork, balsa, or other light weight wood, saw slot in underside of body and inset hook and glue, (3) paint body the desired color, and finish bug by tying in hair or feathers to form wings.

This tool is used to cut the material used and also to trim the finished fly.

Fly Tying Wax: This wax is nothing more than bees wax. Other waxes and formulas are used but bees wax seems to work best of all. The thread is always waxed before tying the fly. This helps water proof the thread hence preserves and prevents the thread from rotting when wet.

Tying Thread: Silk or nylon thread can be used. Nylon has a slight advantage over silk, as nylon will not rot, hence, the fly's life is prolonged. For tiny trout flies, from sizes 10 to 20, size 0000 or 000 thread is best. For large flies and streamers, the thread can be larger, size 00. This size is very popular both in fly tying and rod winding.

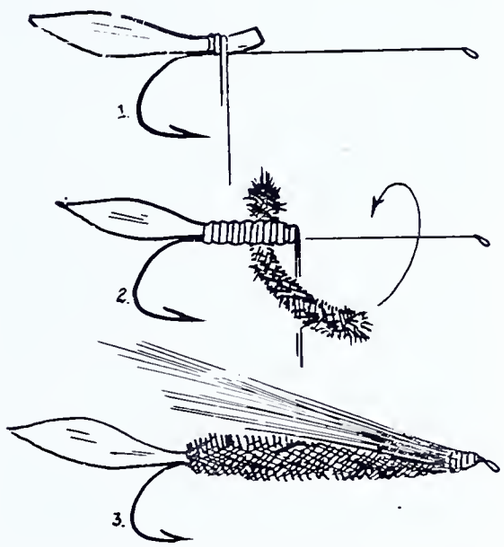
Cement or Varnish: Cement is used to cover the thread and knot at the eye or head of fly. This prevents the fly from coming apart.

Bobbin: This tool can be used to keep the thread taut while tying. It is necessary if the thread is used directly from the spool. Some fly tiers tear three or four feet of thread from the spool, wax and use. However, there is always a short end left over and wasted, so a bobbin pays for itself in a short time.

Materials Used in Construction

Along with good tools, good quality materials are needed to produce flies of high standards. A knowledge of materials is essential, and an understanding of each can help the fly tier in selecting the best material for the job at hand.

Hackles: These feathers, as previously stated, are found on roosters or gamecocks. Located on the neck, these are the best for dry flies. However, shoulder hackles found over the back and saddle hackles found at the base of the tail can be used for large flies such as streamers and bass flies. Hackles are found on the common breeds of domestic chickens and colors produced are: white, buff leghorns (ginger), brown leghorns (brown), plymouth rock (gray or grizzly-barred black and white), black leghorns, and breeds or cross breeds such as badger (dark center, light edges), furnace and cock-y-bondhu. There are many grades of hackle feathers—narrow, stiff and glossy sheen fibers are best for dry flies. Softer hackles are the best for wet flies and streamers. Hackle feathers found on birds two years old or older are best—never those of capons.



Steps in making a simple streamer fly. Figure (1) tie in tail material, (2) tie in body material and wrap material around hook within a quarter inch of eye of hook, (3) tie in buck tail, hackle feathers, or other material used for streamer wings.

Floss: Silk or nylon floss (untwisted) is a very popular and good material. It makes wonderful flat bodies but takes considerable material to build up a thick body. Wool yarn is some times used as an underpadding on bodies and floss can be wound over this yarn.

Chenille: This is a fuzzy like cord and makes excellent bodies. It is very affective on streamer fly, and flies tied to represent grub and caterpillar insects.

Wool Yarn: Yarns are used as underpadding as stated and can be used when a fuzzy body fly is needed.

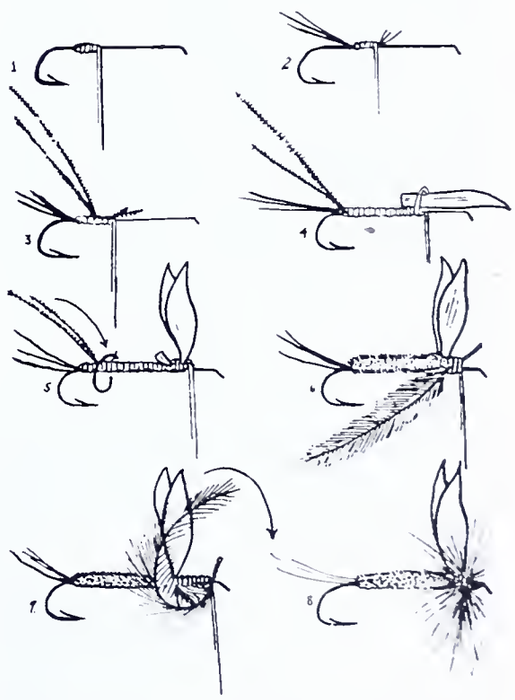
Fur: Animal fur can be spun or wound on wax thread. This is done by placing some fur on a table top and rolling a waxed thread over it. This makes good fuzzy bodied flies. In some fly patterns, the fuzzier the body the better attraction to fish.

Quills: Generally made from peacock tail feathers. The fibers are stripped of the fuzzy herl and used directly on the hook shank as a body material. This gives the appearance of a body which is segmented and a more true version of an insect's body. This is done on all fly patterns such as Cahill Quill, Quill Gordon, Ginger Quill, etc.

Wing and Breast Feathers: These feathers are used as wings on the dry and wet fly. Sections of both right and left wing feathers are taken to be tied in as wings on the fly. In the case of a double winger fly, a fly containing two pair of wings grouped together, two sections are taken from each feather. It is most important that the wing feathers be secured in pairs (one from each wing) so that when sections are taken from each feather both will have identical curves. In the case of hackle wings, merely the tips of hackle feathers are tied in the fly. This is a good fish appealing way of making wings and is much more durable. The wing feathers, like all feathers and material can be dyed red, yellow, green, orange, or any hue or coloration desired. The breast feather is used on fan wing flies, big wing bass flies, or the fibers can be grouped together and tied in the small dry flies. Wood duck breast feathers are the most popular of all feathers for this purpose. They are water resistant and are barbed or specked closely in resemblance to the natural insect.

Fur and Hair: Animal fur and hair is used on many types of flies. Bucktail (deer's hair) tails of skunk, squirrel, caribou body hair, polar bear, etc., are among the many usuable ones.

(*Turn to Page* 21)



Steps in tying a dry fly—Figure (1) hook placed in vise and waxed thread tied to shank, (2) tie in material to form tail, (3) tie in material to make body, (4) tie in parts of wing feathers to form wings, (5) next wrap material used to form body around shank of hook, (6) tie in a hackle feather, (7) wrap hackle feather around hook, (8) the fly is now complete.

The following is very interesting reading, done by one of our better known outdoor writers—typewriter mumblings, as it were, but interesting—read on and see for yourself.

Fishing's Odds and Ends

By Bill Wolf

FISHING literature abounds with advice on how to angle for game fish, the right rod, reel, line and lures to use, the proper technique to be employed in changing the direction of a cast with a fly rod and such assorted high-toned stuff; but it seems to me that a lot of important matters are neglected. For example, how do you skin a catfish? How do you scale a yellow perch which apparently is encased in plate armor? What do you take along on a salt water trip to nearby Jersey or Maryland besides beer and tackle? These are some of the odds and ends of fishing that are of major importance to the man who might, conceivably, not be too much impressed with the finer aspects of angling, but is highly practical.

Let's consider that catfish matter. There are many ways to skin a catfish. Several years ago I had considerable correspondence with a number of fishermen on this subject, and each seemed to have a favorite method. Altogether, there must have been twenty ways of doing the job; but several were far superior to the others.

Now, skinning a cattie may not seem important, but I would be willing to bet that more catfish are eaten in this state than there are trout on the table. No figures are available to support such a statement, but this is being written up in Monroe county where there are a number of good trout streams, and, yet, the natives seldom bother with trout. When they want a good mess of fish for the table, they go out and catch some of the firm-fleshed bullheads that are found in cold water streams. They would rather have them than all the trout in the world, and anyone who has acquired a liking for the rich meat of these bewhiskered fish would agree with them.

However, before a catfish can be put in the pan its skin must come off. This slippery skin clings to the fish like a big court plaster does to the human hide and the problem is: How to separate epidermis from fish?

Recently, I was fishing with some Philadelphians who now live in Minneapolis and among our catch that day were some yellow-bellied bullheads. The lady of the house looked at them rather regretfully when the catch was put in the kitchen sink for cleaning, and said that they were very fond of catfish, but that she hated the job of skinning them.

So I asked how she did it. She said that the best method they had found was to nail the fish to a board, make a cut behind the head, and use pliers to pull off the tough skin! And do you know, a lot of persons still believe that is the best way to do it? Memory took me back nearly thirty years to the days when my grandmother was still alive, and my grandfather and I used to bring home a mess of catfish from Spring Grove dam in York county, or from the Codorus at Hanover Junction. My grandmother would put them in a dish pan in the sink—which really was a "zinc" then, since it was a zinc-lined drain in the kitchen. Then she would take the kettle from the stove and pour scalding hot water over the catfish. Whereupon, their skin would peel off as easily as a peach will peel when similarly scalded. So I advised my Minneapolis friends to try it, and when back in that city later in the year, asked how it worked. They were delighted. It had worked perfectly.

That's the general country way to do it. The same idea, with slightly different application, is found in putting the catfish in a wire basket and dipping them briefly in a pot of boiling water.



The smiling lad holding the big bass is the son of Peter Steech of Grindstone, who took the fish from Koon Lake in Bedford County. Vital statistics: large mouth, 22 inches long, weight 6½ pounds.

In either case, take a dry cloth and wipe the skin from the flesh. A dry cloth is essential to ease in any skinning of a catfish, since they are naturally slimy and slippery. Even without scalding, a cut made completely around the body back of the big broad head will enable the cleaner to strip the skin back toward the tail if a dry cloth is used to get a grip on it. One correspondent suggested using sandpaper, a method which I have never tried, but which should work.

Another fisherman told of seeing a negro down south skinning large catfish and eels by standing on the tail with one foot, and scuffing off the skin with the heel of the other shoe. One man had an intricate device, consisting of a piece of sandpaper nailed to a board, across which he would draw the catfish to rub off the skin. Stick to the scalding method, however, it's the best. The same thing applies to eels, which also are notoriously hard to separate from their skins.

One of the most delicious fish in our Pennsylvania streams and lakes is the yellow perch. Most persons rank it well above the trout in flavor and are glad to bring home a mess of the dark-barred bright yellow fish — but they hate to scale them. Scrape as much as you will, the scales seem to cling to the body as though anchored there. Once again, hot water will turn the trick. Simply dip the yellow perch in boiling water for a few seconds, take them out, and scale them with ease. And, by the way, an ordinary tablespoon makes a fine scaler if nothing else is available. If held at the right angle, it will keep the scales from flying all over creation which is a fault with most patented scalers.

All right, you have caught and skinned some catfish or eels. How are you going to fry them? Most persons dredge them in flour and let it go at that, but why not try a better method? Dip them first in flour well-seasoned with salt and pepper, then dip them into an egg which has been whipped up with a fork and diluted with half an egg shell of milk, then roll them again in half flour, half crumbs seasoned with salt and pepper. Fry in the pan, and enjoy your catfish twice as much as before.

And, since this is about odds and ends that no one ever bothers mentioning much in fishing articles, have you ever tried a mess of chubs or minnows? The four- to six-inch ones that are found in nearly every stream and lake, but which should come from cold water in the spring to suit the purpose we have in mind. Catch a mess of them—which means lots because they are small. Draw them and clean them, fry slowly in butter and eat them like smelts. Fry the whole minnow, because

f you try removing heads and fins here won't be much left; but eat them s you would trout fried whole, picking he meat off the backbone and throwing he rest away. The tiny bones will ractically disappear if they are fried lowly. Genio Scott, writing of "Fishng n American Waters" back about 1874 isted minnows prepared thus as a ountry delight, and they are. This sn't recommended as steady diet beause there's a State limit on how nany bait-fish may be taken, and here's a limit to how many a stream vill produce, but it's a novel change.

Every expert advises against using vater, when cleaning fish, to rinse out he body cavity. They say it will turn he flesh soft when the fish is cooked. can't understand this and don't follow the advice, although I do wipe the ish dry after I have washed it. If the ish is squeezed or wiped dry, the vater can't possibly affect it. Besides, Louisiana Creole cooks—who can hanle fish about as well as anyone in the vorld—advise washing the fish in wa-er before it is prepared for the pan.

I always carry a piece or two of cloth n my fishing bag for the express purose of wiping the fish dry after cleaning, and for wrapping up the fish. It aves hunting around for ferns or rass, and it keeps the fish from coming n contact with each other. Such contact causes those ugly splotches that ppear on trout, robbing them of their atural beautiful coloring. I wrap one ish, then place another above it and old the cloth over, and so on.

Mention of the cloth brings up an essential part of equipment for salt water fishing, which is enjoyed by so many Pennsylvania anglers at nearby shore spots. Most of this is bait fishing, and most salt water bait is both messy and smelly on the hands. The experienced angler takes a large piece of old cloth with him to use as a towel after baiting up. He ties it before him on the rail of the boat he occupies, or to the pier from which he is fishing, or anchors it down with his bait in surf fishing. It isn't a matter of being offended by dirty, smelly hands; but wiping off the bait keeps the rods, reels and other tackle as well as the clothing fairly clean.

Too many men, and women, who make only one salt water trip a year, fail to take along a few things essential to their comfort. Some sort of sun tan lotion is necessary if the arms, face, neck—and bald heads!—are exposed. It will save many later hours of burning discomfort—and watch your legs where the sun might hit them between the top of the sock and the bottom of the pants. Many a man has come home from a boat trip with a fiery band just above his ankle.

The ocean makes passes at men who wear glasses, and I don't know of any more annoying thing than having to wipe salt spray off spectacles every few minutes. A long-visored cap, or hat with a big brim, will prevent a lot of this, and the same precaution applies to inland stream fishing on rainy days. It seems it always rains when I go fishing and one of those jockey-type caps with the long bills goes with me to keep my glasses reasonably clear on every trip. Some persons are bothered with lips that chap, crack and bleed after several days' exposure to sun, wind and salt spray at the shore. It's advisable for them to take along some camphor ice, or one of the several preparations put up in lipstick form to prevent chapping.

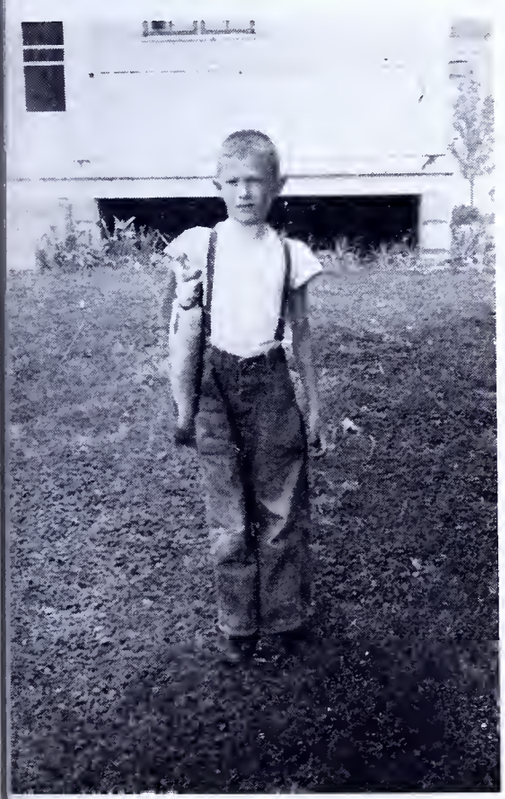
As you can see, this discussion of fishing's odds and ends leads everywhere in general, and nowhere in particular, so it isn't surprising that the next topic would be boots. Some men can't afford to buy waders and wading shoes for stream fishing, and some don't like them, preferring hip boots of lightweight rubber. Now, why, in heaven's name, do boot manufacturers insist on making them with the hard, cleated soles which are the worst possible surface for wading most of our rocky streams? They not only make them that way, but call prideful attention to the cleats in their ads as though they were a virtue instead of the curse that they are. Such soles are all right for walking in sand, but they lead to many a spill in our Pennsylvania trout streams.

Felt soles should be optional on all models of boots, and some year the manufacturers may realize this. As it is now, a few firms make felt-soled boots; but most models are cleated and I have a score of friends who spend hours cementing felt to the soles, filling in the spaces between the cleats and covering the heels with felt. Or else they buy cumbersome chain gadgets and put them on over the boot soles for secure walking.

It's my firm conviction that fishing boots, and a lot of other fishing gear, are designed by persons who never go fishing and never wear the stuff they turn out. For instance, even a very small child could devise some better gadget for holding up the top of hip boots than that miserable rubber loop which is supposed to slip under the belt and snap down. The snap is either too tight or too loose. The loop is made of rubber, which makes it difficult to unsnap it because the rubber gives. Why couldn't they make the loop of canvas webbing, or something less yielding and more durable than rubber?

This brings us, by the devious routes employed in this article, to store clerks who sell fishing gear and never go fishing, don't know anything about fishing, and won't learn. This is a condition more likely to be encountered in the larger cities than in the small towns. A big new store opened in my

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nother young angler shows his stuff. Burnell ossini with a 15½ inch brownie he caught from the Lebanon pumping station dam.



Costy Tarletski, Jr. of Dickson City with a walleye he caught from Lake Wallenpaupack. Length-32½ inches. Girth-28 inches. Weight-12 pounds, 3 ounces. This fine fish fell victim to a red and white plug, a large mouth bass weighing 7½ pounds was caught on the opening day by Costy on the same type plug.

This is the second of a series of articles written for Pennsylvania Angler on the subject of fishing streams. It seeks to impress upon fishermen the importance of knowing all about the rivers and creeks they fish.

STREAMS HAVE CHARACTER

CREEK AND RIVER POOLS

By Dick Fortney

THERE is something fascinating about a deep pool of quiet water along the course of a big creek or river or in the length of a small, sparkling trout brook. Pools attract the attention of fishermen more than do any other sections of a stream, large or small.

For a great many anglers the chief charm of a stream pool is the challenge it presents to their knowledge and skill. The larger and deeper it is, the more difficult it is to fish successfully.

Without pools of some kind, the fish population of any stream would be pretty slim, so far as trout and bass are concerned. True, fish feed in riffles and in swift currents, but they do not spend all their time in such water. Pools provide the necessary areas where they can rest and be assured of protection from their enemies. Pools also provide them an important part of their food.

Whether an angler can catch fish in a stream pool, however, depends on whether it is a good or a bad pool, in the first place, and on whether the angler knows how to fish that particular pool, in the second place.

This question naturally follows:

What are the characteristics of a good pool?

First, it must contain a constant supply of good, clean water; in other words, it dare not be stagnant and dead.

Secondly, it must provide plentiful and adequate cover for its fish population.

Thirdly, it also must contain natural forage for the fish.

Finally, for all practical purposes, it should not be a pocket of extremely deep water, but rather it should be a combination of deep water and of shallows, where fish will feed.

The theme of this article comes up right here—

It is essential that the angler know these qualities of a good stream pool and be able to recognize them before he begins fishing. That ability will enable him to avoid wasting his time fishing water where he cannot reasonably expect to find very many bass or trout.

Every fisherman who has gotten around very much has had this experience. He has come upon a strange pool, one perhaps he never fished before, and has spent a lot of time there, only to discover too late that the pool does not have the qualifications of a good pool and his effort has been doomed to failure from the beginning.

That is bound to happen when the angler fishes a strange pool without first giving it a good inspection.

Now, what are the visible signs of a good pool?

First, as to the quality of the water. Water currents are the best evidence of this. The ideal pool will have a strong riffle at its head, tumbling the water and filling it with oxygen as it enters the pool. A floating leaf or other debris will indicate currents that move the entire length of the pool, keeping this riffle-freshened wate headed downstream all the while. A the tail of the pool riffles again will b in evidence, pumping oxygen back int the water before it enters another are of quiet water below.

Pockets of comparatively dead wate —found usually at the sides of riffle just where the water flattens out in th head of the pool—are nothing to worr the angler. As a matter of fact, man fish love just such spots as places i which they do a lot of feeding.

If a stream pool is longer than aver age, a sort of dead center may be found at a spot where the water looses th speed it picked up in the riffle at th head and just before it begins to spee up into the riffle at the foot of the poo This quiet water also is a good feedin and resting station for trout and bass.

The matter of plentiful and adequat cover is vitally important.

You all know pools in a favorite trou or bass stream that are utterly devoi of fish life. In nine cases out of te that is due to no other factor than lack of proper cover for fish.

Fish know by instinct that they mus have within access places where the can be safe from all their enemies. An mals, reptiles, and birds prey con stantly on all forms of fish life. Fishe men are a constant threat to the safet of the finny tribes. Should they re main in stream areas where they ar constantly exposed, they would soo be exterminated.

But Nature has come to the rescue c the fish by giving them an instinct fo self-preservation. This instinct impel them to shun water areas where the can find no hiding places.

Cover for fish life may be present i a stream pool in a considerable variety Let us consider some of them.

Best of all, of course, are rock forma tions. These may take a variety c forms.

There are stream pools which contai large, flat rocks lying in the open, bu with crevices around them in whic fish may hide. Haven't you ever see the tail of a big bass or trout protruc ing from beneath a rock in a stream

There also are pools which contai jumbles or rocks among which the fis may take refuge. Underwater roc ledges provide perfect cover.



A tumbling torrent of water flows into an extremely deep pocket pool in the left center of this view. Trout hide under the rocky ledges on the sides of the pool, but anglers who are acquainted with the spot know that the water is too deep for dry flies. They take fish from the pool with sunken lures.



Here is a picturesque example of good cover in a stream pool. Two trees have toppled into the water, their whitened branches extending both above and beneath the surface. The stream has hollowed out a deep pocket around them. Almost invariably a good trout can be raised at this location.

Certain streams, in addition, contain
reas which are partly covered by
ater lilies and other aquatic plants.
Heavy growths of vegetation that
xtend out over the water also pro-
de protection for fish. So do cut-
nder banks.
Logs, tree stumps, and other ob-
acles which have toppled into a
ream provide cover for fish. Even
boat dock serves the purpose.
It all boils down to simply this: A
od pool must contain hiding places
r the fish that live in it.
On the third point—that of natural
rage for the fish—it must be admitted
at it is more difficult for the angler
determine if a pool is good from
e angle of the food it provides. Min-
ws, aquatic insects, and other natural
od are not as easily seen as stream
rrents, rock formations, and patches
vegetation.
But there are signs for the informed
gler to read.
One of the more important of these
gns is the presence of vegetation
rowing either in the water or extend-
g out over the surface of the pool.
quatic plants—that is, plants that
ave their roots in the stream bed and
xtend their stalks upward into the
r—are veritable insect nurseries.
hey are swarming with creatures on
hich fish feed. Vegetation that ex-
nds out over the water also harbors
sects which, unfortunately for them,
ll into the water and into the mouths
f waiting fish.
That's the reason the bass bug en-
usiast likes to fish a shoreline that
ontains vegetation. That also is the
eason many a fine trout has taken a dry fly floated along the shore of a trout stream.

Patches of mud on the bottom of a stream pool also are good indicators of natural forage.

Even the rocks which provide shelter for the fish also serve as homes for various forms of life on which they feed.

Schools of minnows, of course, may be observed along the shores of stream pools and along the edges of riffles where they enter pools. At certain times of the day, also, minnows do a lot of surface feeding on minute insects, giving the angler still another clew to the amount of natural forage to be found.

The riffle at the head of the pool, incidentally, is a big factor in the providing of adequate forage. Larvae and nymphs of many forms of insects develop and live in riffles, from where the force of the current washes them into the pools below. It is for this reason that excellent angling usually is enjoyed just where the riffle loses its identity in the calm water at the top of the pool.

Now the fourth point, and we set it down so many hundreds of words ago that it will bear repeating—

The good stream pool should not be a pocket of extremely deep water, but rather it should be a combination of deep water and of shallows, where fish will feed.

This is an easy sign for the observant angler to read.

The reasoning behind it is quite simple. In the first place, extremely deep water is neither pleasant nor easy to fish. The bait angler usually is forced to put some kind of a weight on his lure to get it down, and that weight interferes with the natural action of the bait. The plug caster has to use deep-running lures, and they are the least interesting of all to cast and retrieve. The fly fishermen is simply out of the running most of the time.

But the pool with shallow portions in its area is something of an entirely different nature.

A shallow stretch where the riffle flattens out into the pool is quite common. Fish are wont to prowl about this water, waiting for tidbits the riffle sends down to them, or lurking in quiet

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To all outward appearances this is a big, formidable pool where signs of fish life are difficult to detect. They are. But in this pool, known as The Cove, there are giant ledges of rocks along the far shore, and some big bass and walleyed pike have taken plugs cast to them. Incidentally, it is possible to cast across the pool, since the angler can wade 20 or 30 feet out from the near shore.

Damming of Pennsylvania Rivers Spelled End of Shad Migration

By William Boyd

THE study by legislators of the problem of fishways on the lower Susquehanna River recalls that early period before dams impeded the progress of fish seeking to negotiate the river for the purpose of spawning in its upper reaches.

The story of the devastation of the fisheries of the Susquehanna is a gloomy one. Although the fish weirs and baskets and other deadly devices were used for the capture of shad from the earliest coming of white folk, yet the river yielded enormous returns until about 1830. Then the Columbia dam, which belonged to the Tide Water Canal Company, was erected. Other dams were afterward placed above and below this as feeders to the canals along the Susquehanna.

Some years after, the one below Columbia, called the Safe Harbor Dam, was carried away by a flood. These dams completely destroyed the shad-fishing industry above them. It is true that the Tide Water Canal Company was bound to keep an open passage for fish in its dam, but for many years it failed to carry out this duty.

After the erection of the Columbia Dam, the people who dwelt below seemed to think that the future of the shad fishing industry in the Susquehanna was about at an end, for they threw all discretion to the winds and adopted all kinds of outrageous methods of taking fish.

The river for miles and miles below the dam was studded with innumerable rocks in every form of grouping. Many of these rocks occurred in "twins," with a small place between them, through which the water washed. Between these rocks a fish basket usually was to be found.

Take the case of the Juniata River, in 1829 the run of shad in this stream was phenomenal, the fish being caught in much greater abundance below the dams at North Island than had ever been known. This dam retarded the further progress of the shad up the Juniata and deprived the people upstream of this food fish.

Shad on their way from the sea made almost preternatural efforts to reach the grounds on which they were spawned, there to deposit their spawn in turn. The sight to be witnessed at the base of these early dams was pathetic.

Thousands upon thousands of fish were in the pools, darting hither and thither in frantic efforts to pass the barrier. Sometimes great numbers of them, their silver sides glittering through the water, could be seen following along the base of the dam in vain hopes of finding an opening.

On such occasions as this the fisherman was in his glory. They fished there with a three-pronged hook, sinker, and stout line and pole. This was sunk, and after a few minutes jerked up, often two fish being hooked in this fashion.



Dams such as this stopped the migration of fish in the Susquehanna and other rivers of the Commonwealth.



River dams such as this prevent fish fror moving upstream to former spawning waters

While the great shad industry in th Susquehanna, Delaware, and thei tributaries were being thus ruthlessl destroyed by dams, fish baskets, traps and other iniquitous contrivances, th mountain and other streams and th mountain lakes were being as wantonl depleted of other food fishes just a rapidly.

Wherever there was a body of wate that contained trout, pickerel, catfish or in fact any member of the finny trib worth having, there were to be foun people using the most detestable meth ods for their capture. Every mountai stream contained numberless fis baskets, set lines were zigzagged fror bank to bank, and under the overhang ing bushes.

Not only were seines used to swee the pools, but lime, cocculus indius, an other deleterious substances also. I the natural ponds or lakes, besides a these things, fyke nets, dynamite, an other explosives were used, and exces sive ice fishing was indulged in.

But worse even than fish basket dynamite, deleterious substances an unfair fishing, farther reaching, wa another element—stream pollutio Saw mills were erected in the bac woods on the banks of trout stream and the sawdust dumped into th water. By this means millions of fis were killed.

Within the coal-bearing area mine were opened and the filthy culm, com posed of carbon and clay, emptied int the water; and thereafter pure sparl ling streams, richly populated b

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FLOOD-WOOD FIRES

ALBERT G. SHIMMEL

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RHODODENDRON. The trail back to camp lay a few rods above the secluded spot where the fire of dry rhododendron burned with a clear steady flame. Long before the pitch black hour that precedes the dawn I had felt my way down the steep trial with the aid of my pocket flash. Behind lay three weeks of the hardest study of my life and before me a week of doing as I wished. A few coals at one side of the fire furnished heat for my simple meal, water for tea, a bit of bacon pilfered from the camp larder, and bread toasted carefully and treated with the drippings.

Completing my simple meal I sat relaxed and waited for the blackness to give way to light, after which I intended to spend a full day with the gorgeous native trout of Walker Branch. Without a companion and confident that I would meet no one on the stream so far from the beaten path, complete contentment and satisfaction marked my mood.

A small rustle at my elbow drew my attention to where my creel and rod lay against the bole of a hemlock. In the light of the fire I made out a white footed mouse. Its bright eyes surveyed me inquisitively while the long whiskers at the side of its nose added to its comic picturesqueness. For considerable time it sat with white paws folded over its snowy vest and surveyed the fire, and my motionless figure, then apparently satisfied began to move slowly here and there on a tour of inspection. As it reappeared from behind a bit of fallen wood I became aware of others of its kind, smaller and grayer but with the same wild curiosity. Evidently a mother and her young. They nibbled the stick on which I had broiled my bacon, searched for crumbs, and even disappeared into my creel. Nothing escaped their observation. They ran about chasing each other, climbing the hemlock and coming out on a slender branch just a few feet from my face, with all the agility of a squirrel. I sat interestedly until as suddenly as they had appeared they were gone. The first faint light of the dawn came sifting in among the trees. Time to assemble my tackle and begin the business of the day.

The solitary visitor to the wood and streams may be entertained by the intimate glimpses of the wood folk to compenate for the lack of human companionship.

White birch and pine knots. A veteran woodsman once remarked that the man who had never been lost had never been far from the beaten trail or words to that effect. He might have gone on to explain that whether the experience turns out to be a comedy or tragedy depends largely on the temperament and presence of mind of the individual. Getting lost is generally due to lack of observation and taking proper precautions.

Twenty years ago certain portions of our state after being worked over by the lumberman had reverted to wilderness, untouched except for an occasional hunter or fisherman.

During my work in an isolated mining community I chanced to become acquainted with an angler who boasted of a stream so deep in the wilderness as to be almost primitive. By certain bits of persuasive strategy I was finally made a member of a party of four to spend a day on the secret stream.

Dawn found us at the edge of a mountain plateau with the valley below revealing only the dimmest outlines of the rocks, white birch and pines. From far below came the sound of water, a promise that our bumpy ride over so called forest roads had not been in vain. Carrying only tackle and lunch we decended the rough mountainside and at length came to the small stream at the foot. For a mile we followed it down until it joined a still larger stream. Here the older two members of our party, who knew the country elected to fish up the larger fork while I was to fish down accompanied by Norman a lad of fourteen years. The agreement was that we should meet at this spot at four o'clock in the afternoon.

The trout were extremely cooperative and as our tiny Royal Coachman and Black-Gnat wets searched the rocky pools, black backed, crimson sided brookies snatched at them as if fearful that we would take them away before they could strike. The character of the stream was such that we were lured on and on.

Sometime about mid morning I almost stepped on the smallest rattler I have ever seen. Only the movement of its body as it drew back from the edge of a log accounted for my seeing it at all.

A shot from my pistol ended its career. Then turning it around with a stick I noticed it carried but a single button. Less than a foot in length it aroused my curiosity but not for long. Having since read of a species of pigmy rattlers sometimes found here I have regretted I did not preserve the specimen so as to determine accurately its kind.

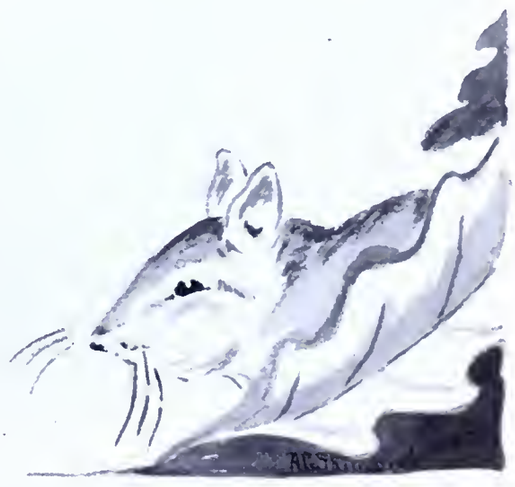
About noon a thunder shower gave us a thorough wetting which caused very little inconvenience beyond thoroughly soaking our matches which I had thoughtlessly stored loose in my fishing jacket.

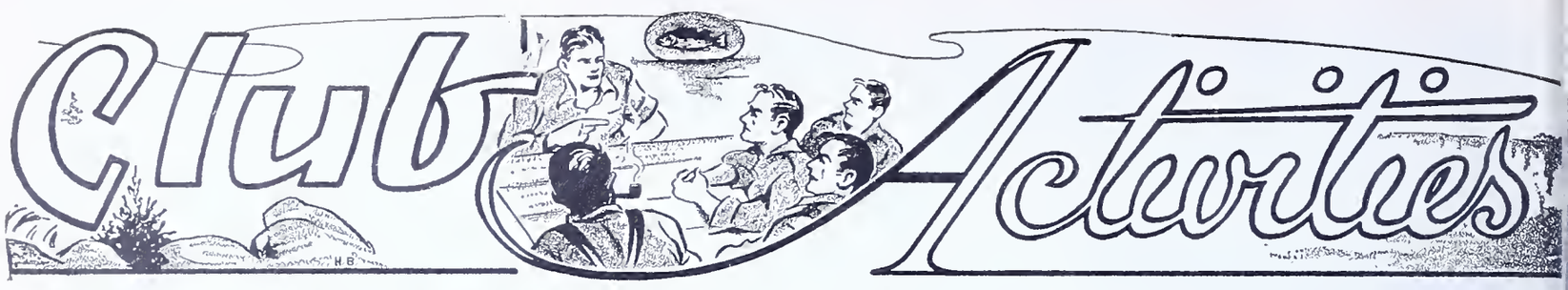
The trout seemed to strike with increased appetites on our journey back upstream and with some degree of shame I recall we carried the legal limit of fifteen each. By walking the last mile at a good rapid pace, we came to the forks of the stream promptly at the appointed time. Our companions had not put in an appearance.

Now to fish in damp clothing is one thing but to stand and wait for some one is quite another. A half hour passed then a full hour, still no sign of our missing guides. My boyish companion began to be uneasy. Rather than risk trying to locate the car which stood some distance back from the edge of the mountain on a plateau on which we might become hopelessly lost I elected to remain where we were until some one came to take us out. To make matters worse a second thunder storm was piling up in the west and its occasional rumblings could be heard.

Searching through my pocket for a possible dry match a handful of .22 cartridges flashed a story that I had heard my grand father tell, into my mind. If he could make an emergency fire with a muzzle loading rifle why not try the same with a revolver. Norman was becoming more and more upset by the prospect of spending the night in the woods looked at me with amazement when I told him to gather fuel

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Mont Alto Patients Offer Trout Flies for Sale Instructed by President of Chambersburg IWLA

Early this fall, Dr. Warren Gette, a member of the Medical Staff at the Mont Alto Sanitorium, South Mountain, Pa. started to teach some of the patients a few of the fundamentals of fly-tying. This was received by many of the patients with such zeal, that Dr. Gette soon had to seek outside help on his new project. He contacted, Tom Norris, Forester, near Caledonia to assist in this worthwhile pastime. Norris is also the President of the Franklin County Chapter of the Izaak Walton League.

On Monday and Thursday of each week the class meets. Monday is devoted to practice and Thursday to learning new steps in the work and new flies. About one half of the class is composed of women. These patients are active cases of T.B.

It is the hope of these people to be able to sell some flies and they will be glad to receive orders for any type of fly and will send them on approval, at a price within keeping of similar flies on the market. Mr. McClain, Vocational Director, South Mountain, Pa. should be contacted or if anyone has any books on fishing or equipment for fly tying that they do not need, it would be appreciated by these patients. Jack Stowell, Eastern Representative of the Izaak Walton League of America has sent $50.00 worth of hooks, vises, thread, etc. which was given by the National Headquarters of the League.

The Franklin County Chapter members are gathering squirrel and deer tails and feathers for these people.

I can not think of a more worth while act on any person's part, than to help these individuals. We who are hale and hearty are prone to forget about our less fortunate fellowmen. It gives him something to think about other than his illness. What a thrill it would be for a patient or all of the class for that matter, if a fisherman sat down and wrote a letter to them, telling them how they caught a big brownie on a fly that was made by them.

What do you say fellows?

W. W. BRITTON,
Fish Warden



Boys from the Northampton High School fishing club in action. The photo was taken December 2, 1948 while stocking the Hockendauqua Creek at the Lappawinzo Fish & Game Association Dam. The fishing club was organized in 1939 and it's members have helped stock local streams since that time. The center figure, pointing to can, is the district fish warden Harvey Neff, standing in the back ground is Mike Lisetski fish warden and faculty adviser to the club.

New Fishing Club Makes Progress

The Hydro Fishing Club formed by Pennsylvania Water & Power Company and Safe Harbor Water Power Corporation is gaining members very rapidly. Well over 300 fishermen have become members of the club in its first three wecks and additional applications have been received at a rate of about 25 a day.

The Federated Sportsmen's Clubs and the hydroelectric power companies report that the contest sponsored by the fishing club has proven very popular.

The Walleye-Susquehanna salmon fishing at Safe Harbor and Holtwood is excellent, limit catches are frequently reported. Several fish measuring 27 inches and weighing 8 pounds, were taken on buck tails at Safe Harbor. The lucky and to some extent unlucky fishermen waited until the day they went fishing to apply for fishing club membership with the result that these fish were not eligible for prizes. A contestant is not eligible for a prize until the date the Federated Sportsmen's Clubs approve the application.

Questions regarding eligibility of a contestant for more than one prize were referred to the Pennsylvania Water & Power Company who advise that a contestant is eligible for one prize only.

Penna. Federation of Sportsmens Clubs

Dr. C. A. Mortimer, secretary of the Federation of Sportsmen's Clubs announces the annual meeting of the Federation will be held Saturday, Feb. 12, 1949 in the Forum of the Education Building, Harrisburg, Pa. at 9:30 A.M.

"The Directors will meet at 10:00 A.M. Friday, Feb. 11th at the Penn Harris Hotel, Harrisburg, Pa., to be followed immediately by the Panel Sessions.

"According to the by-laws all resolutions to be presented at this meeting should be in the hands of the Federation Secretary by January 13th, 1949 which is the 30 day deadline. We like to have them as promptly as possible as these resolutions have to be segregated and retyped for the multilith machine and prepared and sent out to all the clubs in the State before the general meeting, and we like to have them in the hands of the clubs ahead of the General Meeting."

Western Clinton County Sportsmen's Assn.
Clinton County Fish & Game Assn.

The Western Clinton Sportsmens Association was tendered a treat by the Clinton County Fish and Game Assn. when they brought the pictures they had procured for their October meeting to Renovo. A large and enthusiastic audience composed to a large extent by the younger folks, was on hand to enjoy these fine pictures so generously provided by the neighbor club.

Several Nice Catches Listed in Club Contest



"Keep only the big ones—mount 'em—throw the small ones back" contest winners of the Homestead District Sportsmens Association. Each fish is held by his captor, the heads are mounted and now hang on the club room wall. The winners were : Top left, Jos. Bordas of Homestead. Top center, Jess Best also of Homestead. Top right is Wm. Renquest the club president. The bottom row, left to right: Walter Bittner III, of Munhall, Teddy Baer, Homestead, and Wm. Bittner, Jr., of Munhall.

The Black Bass Contest, sponsored by the Homestead District Sportsmen's Association, closed at midnight, December 5th.

Despite the inclement weather groups of local fishermen spent their week-ends at Conneaut Lake, Canonsburg Dam and the Allegheny River, from Lock Six to Tionesta, in hopes of hooking a prize-winner before the season closed November 30th.

Plenty of bass have been taken at Conneaut Lake, but none large enough to break into the charmed circle.

The standing in the contest, is as follows:

Joseph P. Kovacs, Hazelwood—Small Mouth Bass—Length, 23 inches; Girth, 13½ inches; Weight, 5½ pounds; Caught at Canonsburg Dam; Bait, live minnow.

Jack Early, Homestead—Large Mouth Bass—Length, 21 inches; Girth, 13¼ inches; Weight, 5 pounds, one ounce; Caught at Canonsburg Dam; Bait, soft-shell crab.

William A. Sari, Rankin—Large Mouth Bass—Length, 20½ inches; Girth, 14½ inches: Weight, 4 pounds, five ounces; Caught at Conneaut Lake; Bait, darter frog.

James Sare, N. Braddock—Large Mouth Bass—Length, 20¼ inches; Girth 13 inches; Weight, 4 pounds; Caught at Conneaut Lake; Bait, cripple minnow.

William A. Sadi, Rankin—Large Mouth Bass—Length, 20 inches; Girth, 14 inches; Weight, 4 pounds; Caught at Conneaut Lake; Bait, darter frog.

Joseph Bordas, West Homestead—Large Mouth Bass—Length, 19 inches; Girth, 12¼ inches; Weight, 3¾ pounds; Caught at Conneaut Lake; Bait, flatfish.

"Bulgy" Bittner, Munhall—Small Mouth Bass—Length, 17½ inches; Girth, 10½ inches; Weight, 2½ pounds; Caught at North Girard, Lake Erie; Bait, live minnow.

James P. Harkins, Millvale—Large Mouth Bass—Length, 16 inches; Girth, 9 inches; Weight, 2 pounds; Caught at Spring Lake; Bait, true-temper shad.

The two largest springs in Pennsylvania are Boiling Springs and Big Spring, both in Cumberland county. The flow from these two springs, would be adequate to supply a city of 300,000 to 400,000 population.

Consolidated Sportsmen of Lycoming County

John H. Bender, president of the club reports that their membership drive for 1948 is likely to reach the 11,500 mark. The number actually reported at the last available tabulation was 11,352 and there were still 30 books of membership tickets in the hands of salesmen to be accounted for.

The mark set for the 1949 campaign is 12,000. They hope to enroll 10,000 senior members and 2,000 junior members.

They have worked out a very comprehensive plan of campaign and expect to enlist at least 750 workers to put the plan across.

Three central committees have been set up to manage the various phases of the drive. They are—

1. Promotion and Publicity, John H. Bender, Chairman.

2. Membership books, accounting etc. Don Starr, Chairman.

3. Setting up lists of workers, Charles Winter, Chairman.

Then there are 33 district agents who are in charge of the drive in certain areas of the city of Williamsport or of towns and districts throughout the county. These men will have the responsibility of selecting workers for their districts and accounting for the membership books and moneys in their districts. And then there is a committee of 11 men to head up the drive for junior memberships with representatives throughout the school systems of the county.

Posters and various forms of publicity will be used to promote the drive and the whole hearted cooperation of the manufacturers and business people is being solicited.

They really have a comprehensive and detailed plan of campaign laid out. And there is little doubt that it will achieve the desired result.

SKISH NEWS LETTER

NATIONAL SKISH BOARD

BETTER FISHING, INC.
509 S. Wabash Avenue
CHICAGO 5, ILLINOIS

November 20, 1948.

VOL. I - NO. 10.

TO ALL ANGLERS:

The 1949 Edition of the NATIONAL SKISH GUIDE will be off the press and ready for mailing December 1, 1948. Your free copy will be sent for the asking.

By popular request we have added several new events, namely, Skish bait distance, Skish fly distance and Skish spinning distance. A new Skish bass bug accuracy event has also been added for the ever increasing number of bass bug fishermen. These new events will round out a complete program covering every phase of fresh water angling.

The rules have been simplified and with the least number of restrictions possible. All games can be played with standard fishing tackle procurable in most any sporting goods store. It is not necessary that tackle be expensive. All standard brands have met with favor among the thousands of fishermen who have taken a keen interest in Skish as a means of improving their casting.

Effective as of this date, there will be no registration fee for registered tournaments. This will be good news to the hundreds of clubs who wish to register their tournaments with the National Skish Board. To be eligible for Skish awards, your tournament must be registered with the Board.

We also have good news for the thousands who failed in 1948 to win either an "Expert" or "Master" chevron. In 1949 we will issue a "Merit" award to those making a score of 50 to 64 inclusive in a registered tournament. This award will be comparable to our present chevrons.

This coming year will see the greatest advance ever made in Skish casting. In 1949 we will sponsor our First Annual All Skish National Tournament. Without a doubt, it will be the largest casting tournament ever held in the history of target casting. Every event will be a fishermen's event, and with fishing tackle.

Sincerely yours,

Clare Bryan

Clare Bryan, Chairman
National Skish Board.

CB:EPG

It's easy to marry a fisherman—they're a cinch—but getting along with him afterwards is something else again. Nevertheless, it can be done.

The Care and Feeding of Fishermen

By Vic Skiff

ABOUT a million wives, mothers, sisters, sweethearts and other assorted gals in our State have to put up with menfolks who are fishermen. Generally speaking, they're a patient, understanding and long-suffering crew. One of them, being a very smart gal, has aided and abetted us in this form of lunacy for twenty years.

Maybe not many women regularly read the *Conservationist,* and maybe we ought to stick to conservation—but with our glass chin stuck out a mile, we herewith walk right into the middle of a thousand domestic squabbles. After all, there's a big new crop of war brides, and a lot of them have discovered by now that among other things they married a fisherman. We now take them by the hand and disclose a few secrets on how to handle and at the same time cash in on this species.

A Lesser Evil

First and foremost, in order to preserve your sanity; to have some kind of defense against the sharp-tongued wives of those who pose as model lawn-cutters, gardeners and the like; and to rationalize the whole thing, we suggest the development of a superior and philosophical attitude towards fishing. As a basis for it, we suggest that fishing be regarded as a lesser evil. Everybody knows that all men are bums at heart. Fortify yourself with the belief that you're married to a nice kind of a bum who spends so much time and money fishing that fast women, gambling, gin-mills, and other major evils get little attention from him. And ask your family doctor if fishing—with sunshine, fresh air, exercise, and relaxation—won't make your man live longer and be more effective in his day's work.

Come to think of it, fishing isn't even a lesser evil—it's a blessing in disguise —*but don't let him think* so. Keep him thinking it's something he's *just getting away with* because for trading purposes, as we point out, it has few equals.

Avoid Pre-Nuptial Pledges

Don't try to settle the fishing issue before taking him to the altar. It's just one of the things you have to work out as you go along. If you're one of those women who can't let her husband out of her sight, pass up your fisherman in favor of a bee-keeper or a tulip grower. Or just pass him up.

"All's fair in love" to be sure, and many a well intentioned gal who never donned a pair of rubber boots or baited a hook has insisted during courtship that she wants nothing more from life than to be able to follow her man through the brush, the rain, etc., in quest of trout, bass and the Great Outdoors. That's good sales talk, and harmless enough, if you don't insist on doing so. Husbands and wives who are real fishing pals are swell—practically out of this world—but very rare. If your husband has a hundred good men friends, there'll be only one or two he likes to fish with, and your chances of making the grade are even less.

This doesn't mean you can't share vacations. You can go hundreds of places where you both can do all sorts of summer resorting—and he can get in his fishing to boot.

Fishermen Aren't Stratified

Fishing cuts across all social and economic strata. It's sort of a common denominator. Be prepared for all kinds of odd characters your "Joe" may fish with. If you happened to catch yourself a blue-blood—and a ragamuffin shows up and wants to know if Joe will go fishin' Saturday—treat him like somebody out of the social register. If you dont you'll make a real social error in the fisherman's book. Conversely, if you caught yourself a swell young truck driver and the president of the bank calls up looking for him early in April, don't jump to the conclusion that your account is overdrawn.



"Now Mr. Frombly, think. When your wife said you went fishing too often and put the curse on you, just what was it she said?"

Expenses

From time to time the family budget will be strained by the cost of new gadgets to which all fishermen are addicted. The clever wife takes care of these matters along with Christmas and birthdays. But—and here we issue a real warning—don't simply walk into any old sporting goods store and buy any old piece of equipment in the belief that you are going to score heavily with your husband. No two fishermen subscribe to the same theories on rods, reels, lines and other equipment. However, it's easy enough to find out what he really wants and then to get him exactly that, refusing all substitutes that your dealer tells you will please him just as well.

Having done so, you'll be solid enough to bargain for that fur coat or the $20 hat. Here's where the trading we spoke about comes in. Women are usually so far ahead of us in these matters that nothing more need be said.

Don't Monkey with Tackle

Many a real crisis has arisen on the night before a fishing expedition because the good wife has cleaned the house and gotten everything organized, with the result that nothing can be found. Find a corner in the house where he can keep his stuff inviolate—and never make a raid on it for your brother, your uncle, or your husband's father-in-law. If equipment is to be lent let it be his responsibility.

Getting Ready

Preparations for a fishing trip are mighty and fearsome—until you learn to take them in stride. Leave the equipment up to him, but make sure he has his long underwear, his wool shirts, wool socks, etc. on deck and ready to go. Many fishing trips start at an ungodly hour in the morning. If you don't mind getting up, there is absolutely nothing which improves your bargaining position more than giving him a good hot breakfast. And a small hamper stocked with a thermos bottle full of hot tea or coffee, at least three sandwiches, a piece of pie or cake, and a couple of oranges will be a reminder, come noontime, that the little woman was right on the ball.

Remarks on His Catch

This is a delicate matter requiring the highest degree of diplomacy. Poor fishing will be evident as soon as he walks into the house, in which case it is sometimes best to be so completely occupied that no comment is required. If he had some luck—pour on the oil. This is easy in the case of big fish. In the case of small fish it is necessary to fall back on the premise that after all

Reprinted from the New York State Conservationist

small fish are more toothsome and easier to prepare.

These are just a few of the main principles relative to the care and feeding of the fisherman. They will sound extremely elementary to those who have had experience in this field, but in treating so vital and touchy a subject we thought it best to begin at the beginning. There is, however, no way of telling where this sort of thing will end up. We will watch our mail with a wary eye.

BRINGING BACK CLEAN STREAMS IN PENNSYLVANIA

(*From Page* 3)

cures its water supply from the streams. The rights of the people to have clean water, which is a matter of public health, cannot be longer ignored.

From an economic point of view, it is also of absolute necessity that the streams be restored to a clean condition. Industry has a stake in this equal to that of the public for industry requires water for its operation. Foul water makes operations difficult and expensive and in many cases impossible. We cannot prosper without a prospering industry. We cannot attract industry to Pennsylvania if water is not available and if the available supply is largely the dregs of sewage and other wastes. Clean waters are vital to our wellbeing and under the program of the Board will become a reality.

Pennsylvania Fish Law Violations

Cases Settled During the Month of October 1948

Armstrong County
Prazenica, Paul C., 634 Ridge Ave., Ford City. Operating a motor boat without a license ..... $ 5.00

Blair County
McCoy, John, Duncansville. Fishing without a license 25.00

Cumberland County
Sinn, Edgar D., R. D. No. 1, Carlisle. Fishing without a license 25.00

Lackawanna County
Thomas, Harold, Star Route, Waverly. Drawing off dam without a written permission 100.00

Philadelphia County
Diamond, Martin, 6004 Cedarhurst St., Phila. One undersized bass 10.00

Washington County
Hornbaker, Melvin E., R. D. No. 2, Clearspring, Md. Illegal device ... 20.00
Hornbaker, Jacob E., R. D. No. 2, Clearspring, Md. Illegal device ... 20.00

Comfortable soles for rubber or leather footwear can be cut from an old felt hat.

"YOUR FRIEND...THE 'RAT"

By Donald Shiner

THE CURIOUS little slick furred muskrat along with his neighbor the beaver, is indeed the angler's friend. He is strictly a vegetarian and disturbs little, if any, the many fishes of the streams.

However, in his ever ambitious way he constantly digs new homes or burrows with the entrances under water. Those who have made a study of this webbed footed little animal, tell us they do this to hide the entrance from their many enemies. This underground, underwater tunnel offers not only protection for the muskrat, but even offers a fine hideaway for many fish.

I recall one particular day of angling the headwaters of a dam, this was of a slough nature, high banks of dirt and rock, and many tributaries coming in the main stream, and as a result the bottom was quite shallow, due to the many sticks, leaves, and silt which settled there. It was an ideal place for the fish to feed since all these little tributaries carried food morsels (insects and water larvae) and deposited them in this area of slow moving shallow water.

However, since the water was quite shallow the fish were easy prey for enemies about them—hawks, mink, etc., and easy prey for snakes, turtles, and the many water living enemies.

But as I was searching my way along the bank, I noticed muskrat burrows and entrances under the shallow water. As I cast a fly out and allowed it to settle, I slowly jerked the fly past



A close up view of the animal in mention, strictly a vegetarian, and a constant home builder.

one of these "holes." Something hit with a terrific jolt—a two pound trout! The cold water made him very lively, and he was beautifully marked.

Spying another hole I cast my fly and allowed it to sink, as it passed the muskrat hole, another trout rushed from the tunnel and another strike was forth coming. This fish was not quite as large as the first, but indeed a fine specimen.

I recall too of other instances where I have seen fish enter and emerge from muskrat burrows, and have came to the conclusion that the home of the muskrat offers protection and safety for many, many fish.

They, the 'rats, are definitely a benefit to our angling waters in this way, probably in more ways also.

Snapping Turtle

The snapping turtle, as he is popularly called, is one of the really queer forms of turtle life. He is one of the meanest of all turtles, and will snap at anything that happens to get in his way or within his reach. So powerful is his 'strike' that he has been known to nip off men's fingers, and speaking of striking, which is exactly what he does, this turtle defends himself more like a snake than any other turtle. He doesn't pull in his head in most instances but, instead, goes right after the enemy with a quick and murderous strike of his jaws, his neck extending out much father than thought possible . . . And perhaps the most amazing thing about this snapper is his unusual habit of eating everything under water. That's a fact! If snapper can't eat under water, he starves. And this even though he's an air-breather . . . If snapper happens to be in the same water as a few ducks, the ducks stand a good chance of being his dinner. Snapper grabs ducks by the feet and pulls them under the water until they drown, then he removes the feathers and has his meal.—*Ohio Cons. Bulletin*.

The Spoiler

I think that I shall never see
A man so asinine as he
Who leaves his camp fire ere it's out,
And throws his burning butts about.
A man who lives for just today,
And burns the forests, come what may;

A man who hunts 'tween dusk and dawn,
And catches fish that went to spawn;
Who kills a deer for killing's sake,
And leaves it for the wolves to take;
Who overtraps a beaver house,
And in closed season shoots ruffed grouse;

A man who goes his selfish way,
And cares not who must sometime pay
For all the devastation wrought
By him, who never had a thought
For those whose heritage he'll spoil,
To whom he'll leave just rock and soil.

M. V. Gillard

Women are wise about facts and figures. A girl with a good figure soon learns the facts.

With the Outdoor Writers

The Outdoorsman
in the York Dispatch

The striped bass or rock fish is truly a "he-man" fish. Firm of mouth, big of head and "shoulders", broad of tail, it is the answer to a fisherman's prayer. The strongest tides and the highest surf present no problems to this powerful swimmer.

The rivers that empty into Chesapeake bay account for most of our striped bass stock. Many York countians fish daily below Conowingo dam in the hope of catching and displaying one of these prizes.

An extensive study of the concentric rings on the scales of this fish have revealed its life secrets. It is said that striped bass are five to six inches long in the early summer just after their first birthday anniversary. Two-year-olds are 10 to 12 inches long and three-year-olds approximately 16 inches long. Four-year-olds are roughly 20 inches in length. Above the four-years it is more difficult to determine the age accurately, but 10-pound striped bass will average seven to eight years old, 25 pounders will be about 12 years old, and 50 to 60-pounders should be 20 to 30 years old.

Since it has been learned that "stripers" do not reproduce until they are about three years old, various states have enacted legislation protecting them below 16 inches in length from both sport and commercial fishermen.

John Crowe
in the Johnstown Tribune

This past summer I saw a common watersnake about two feet long catch a sucker fully half as long and two or three times as thick. I guess it would be more accurate to say that I saw the snake and sucker just after the catching, for the commotion of the terrified sucker was what attracted my attention.

For a minute or two that sucker took that snake for a violent ride about the pool, but the snake hung on even though temporarily out of control of the situation. Finally, exhausted, the sucker lay still and the snake took over, pushing the fish out along the bar.

Can a snake of such size actually swallow a fish three or even four times its (the snake's) diameter? Easily. I once kept a 15-inch watersnake in an aquarium for several months. That snake once swallowed a nine-inch sucker, accomplishing the feat in a little less than a half-hour. That half-hour does not include the time the snake spent getting started on the swallowing. Incidentally, that watersnake liked his fish fresh. I could drop a dead minnow or small sucker into the aquarium; he'd pay no attention to it, even after he'd been fasting for a week or two. But when I'd put a live fish into the tank it was another story.

The snake might need two or three days to catch its prey, but sooner or later he'd get hold. Once he did get a hold, he kept it.

John Alden Knight
in the Johnstown Democrat

Way back yonder, when I was a little boy, I remember—rather vaguely, to be sure—that there used to be a custom, broad in its scope, known as "common courtesy" or "politeness."

Men used to stand up and give their seats to ladies in public conveyances. Men used to tip their hats to ladies, not merely touch the brim and say "Hi." Well brought up folks stood aside to let others through doorways ahead of them. All sorts of things like that.

Today most of that sort of thing is as dead as the dodo bird. People haven't time to be polite any more. Ninety-nine and one-half percent of them belong to the "I'll get mine" society. Three cheers for me and to hell with the whole world. This attitude doesn't make for very pleasant living.

Just as is the case on our streets and highways, common courtesy has disappeared from our fishing waters. No longer can you "rest" a pool in a trout stream with the assurance that any chance newcomer, seeing you seated on the bank, will by-pass your waters at a respectful distance and find an unoccupied pool for himself. Today the newcomer will splash his way into your pool, heave out a contrivance which looks like a roller skate decorated with gang hooks, put your fish down for keeps, and then make his obnoxious way upstream to do further damage. To any remonstrances you may make comes the stock reply, "Aw nuts; you don't own the crick."

Of course, some of these fellows don't know any better, but most of them simply don't give two hoots about the other fellow. We call them weasels.

On a lake, weasels are just as bad. They race ahead to the best locations, cutting in directly in front of you if you are fishing a shoreline. If you are playing a fish, it is not uncommon for a weasel to rush in and start fishing within rod length of your boat.

The other day, I saw a weasel disposed of in proper fashion. A young man who is hard as a rock and very handy with his fists had just raised an old bouncer of a bass. The big fish came short to the bass bug and he made a prodigious splash at the surface. With that, a weasel on the far bank waded out waist deep and began to cast furiously over the spot where the bass had come up.

The young man reeled in his line and waded ashore.

"Having a little weasel trouble?" I inquired.

He didn't reply immediately. Instead, he picked up a stone the size of his fist and heaved it, kersplash, where the fish had risen, barely missing the weasel's bass bug. Then came the answer.

"Not any more, I'm not." Ungrammatical, but very effective.

Only a few days ago I received a letter from a well-known outdoor columnist, deploring the manners of the majority of the fishermen of today. One paragraph went as follows:

"The other day, while in a Smoky Mountain stream trying for rainbow, two anglers came a busting up the water in my direction. I was nearing a favorite pool and had stopped to ascertain just exactly where I should place my fly. Before one could say 'spent-wing Adams' those two fishermen passed me up and knocked the water level of that promising pool down two inches! On up they went, putting every rainbow down for the remainder of the day while I despondently turned back."

There is no need here to go into the whys and wherefores of angling etiquette. Goodness knows, every literate person is familiar with the ordinary rules of politeness and these rules apply to fishing just as they do to any form of human contacts. The Golden Rule covers the matter. To re-phrase it into modern parlance, "Give the other fellow the same break that you would like to have him give you." Follow that rule and your days astream will be far happier. In other words, don't be a weasel.



Ralph Sides
in the Lancaster New Era

Maryland and Virginia are feudin' and fightin' . . .

It's nets to Virginia and nuts to Maryland—as a result of the lower state getting permission to use larger nets for commercial fishing.

Maryland considers this would greatly cut off the migration of shad, croakers and other species from their waters.

The grant was given by the Army in control of navigation and not with any thought of conservation.

The two states have been at each other's throats for a half century in which time the fishing in Maryland waters has suffered a 50 per cent reduction, attributed to the netting practices of Virginia.

The use of larger nets would also hurt fishing for sport north of Virginia and in the Susquehanna river below Conowingo.

STREAM-SIDE LIFE

THE DUSKY SALAMANDER

By ROBERT LEO SMITH

In mid-winter, streamside life is at its lowest ebb. But beneath the swift currents of the winter brook, you may find some of the stream-side inhabitants of the summer months. One to be found is the dusky salamander, *Desmognathus fuscus fuscus,* common throughout the whole of Pennsylvania.

During the spring, summer and fall months, the dusky salamander commonly lives within a few feet of springs or streams, in leaf-filled trickles and springy banks where the soil is moist. But with the advent of winter, it takes to the water where it can find shelter beneath the stones on the stream bottom and feed on the nymphs of aquatic insects.

When spring returns, the dusky salamander leaves the water to breed. The male deposits spermatophores, gelatinous vase-shaped masses with glossy transparent bases surmounted by small, whitish caps, which contain the spermatozoa. The female crawls over these, taking the spermatozoa into the cloacal chamber where they are held ready to fertilize the eggs. Sometime from June to August, the female lays fifteen to twenty creamy white eggs in a compact mass in a small cavity near a brook, spring or stream. This nest is well hidden under a pile of stones, deep down in loose, soft earth under some completely buried log or stone, or beneath old bark. Arched about the eggs in a form of a semicircle, the female closely guards the eggs until the larvae hatch.

The larvae are small creatures, barely more than an inch and a half long, grey on the back with two rows of small light dots and possessing prominent, slender, glistening white gills. The larvae may leave the nest in two or three days or may remain there a considerable length of time if the weather is dry. As soon as they leave the nest, they start in search of water. Since they are hatched near a stream, usually all they have to do is to burrow down into the soft earth or to follow some crevice downward until they reach water and then travel to the shallow margins of the stream. Here they remain through the autumn, winter and spring, a period of eight to ten months, when they transform into adults. Transforming larvae are found at the margins of streams, pools and springs, among water-soaked leaves and under stones in wet places.



The dusky salamander is mostly nocturnal in its habits. During the day it remains hidden beneath logs and under stones near the water's edge. If disturbed, it darts quickly away and seeks to hide beneath some stone or slithers away into the water. It is an active burrower, often excavating long tunnels into which it can retreat, and a fairly good climber. During the summer months it feeds on earthworms, slugs, snails, spiders, mites and insects.

The adult dusky salamander is small, about three and one-half inches in length, the male being slightly larger than the female. It is variable in color. Its back may be yellow-brown to black, with two irregular rows of black dots and a mottling of black on its sides; and the underparts are a light flesh color, tinged with bluish and a small light bar extends from back of the eye to the angle of the jaw.

Ice Water Spoils Flavor of Fish

Sometimes much of the meat value of fish is lost by improper handling between the time the fish are taken from the water and when they reach the skillet.

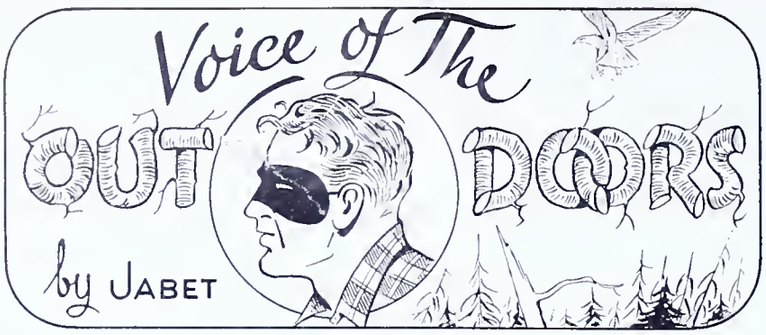
Tossing a stringer of fish into the trunk of the car or a bucket of water for a two or three hour journey home may result in the loss of much of the delicate flavor of freshly caught fish. Most fish fanciers know that the sooner the fish reach the dinner table after being caught, the better the eating. So it is recommended that care be taken in preserving as much as possible this freshly caught value of fish.

The use of the creel has been found to be convenient and effective by many fishermen, particularly on extended trips. But stringers will serve as well for shorter trips if used right.

So long as fish are alive they may be kept in water, hanging over the side of a boat or tied to a tree root along a stream; otherwise they should have gills and entrails removed immediately to prevent rapid deterioration. Old timers like to wrap each individual fish in watercress, lily pads or other water plants and place them in a container, such as a creel, which is not airtight, and occasionally sprinkling them with water. Another good method is to wrap the catch in burlap which is kept moist. Natural evaporation will keep the fish surprisingly cool.

When possible the fish are then placed on or in chipped ice but never allowed to come in contact with the water from the melting ice.

With a little extra care fishermen can save many pounds of delicious eating and preserve that fresh-caught flavor often lost between the catch and the skillet.



"A Legacy"

In the pocket of an old ragged coat belonging to one of the insane patients of the Chicago poorhouse, there was found after his death, a will. According to Barbary Boyd in the *Washington Law Reporter,* the man had been a lawyer and the will was written in a firm, clear hand on a few scraps of paper. So unusual was it that it was sent to another attorney, and so impressed was he with its contents that he read it before the Chicago Bar Association. A resolution was passed, ordering it probated and it is now a matter of record in Cook County, Ill. This is the will of the insane patient of the Chicago poorhouse:

"I, Charles Lounsberry, being of sound and disposing mind and in memory, do hereby make and publish this my last will and testament, in order, as justly as may be, to distribute my interests in the world among succeeding men:

That part of my interests which is known in law and recognized in the sheep-bound volumes as my property, being inconsiderable and of no account, I make no disposition of this in my will. My right to live, being but a life estate, is not at my disposal; but, these things excepted, all else in the world I now proceed to devise and bequeath.

Item: I leave to children inclusively, but only for the term of their childhood; all and every flower of the fields and blossoms of the woods, with the right to play among them freely according to the customs of children, warning them at the same time against thistle and thorns. And I devise to children the banks of the brooks and the golden sands beneath the waters thereof, and the odors of the willows that dip therein, and the white clouds that float high over the giant trees. And I leave the children the long, long days to be merry in, in a thousand ways, and the night and the train of the Milky Way to wonder at, but subject nevertheless to the rights hereinafter given to lovers.

Item: I devise to boys jointly, all the useful idle fields and commons where ball may be played, all pleasant waters where one may swim, all snowclad hills where one may coast, and all streams and ponds where one may fish; or where, when grim winter comes, one may skate, to hold the same for the period of their boyhood. And all meadows, with the clover blossoms and butterflies thereof; the woods with their appurtenances; the squirrels and the birds and echoes and strange noises, and all the distant places, which may be visited; together with the adventures there found. And I give to said boys each his own place at the fireside at night, with all pictures that may be seen in the burning wood, to enjoy without let or hinderance or without any encumbrance or care.

Item: To lovers I devise their imaginary world, with the stars of the sky, the red roses by the wall, the bloom of the hawthorn, the sweet strains of music, and aught else they may desire to figure to each other, the lastingness and beauty of their love.

Item: To those who are no longer children or youths, or lovers, I bequeath the power to have lasting friendships, the capacity for courage, and undaunted faith.

Item: To our loved ones with snowy crowns, I leave memory, the peace and happiness of old age, the love and gratitude of their children until they fall asleep."

—After all, was he so poor and insane? If that was the world in which he lived, was he not far richer than are some who go about freely and have money in the bank? In any event, to each of us he bequeathed something; Let us not fail to get our legacy.

In Memorium

It is with extreme regret that the PENNSYLVANIA ANGLER announced the passing of state fish warden, Mr. Harry L. King of Washington, Washington County, Pa.

Mr. King who was born on January 7, 1893, was appointed to his position with the Fish Commission on April 10, 1944, and served in that office with efficiency and credit to both the people of his district and of the state of Pa. His passing on November 23, 1948, reaches a void which will not be easy to replace.

The PENNSYLVANIA ANGLER regrets to announce the passing of Jacob J. Fickies an employe of the Erie Hatchery, Erie County, Pa.

Born on October 23, 1867, Mr. Fickies was for many years a commercial fisherman on Lake Erie and came to the Fish Commission on February 19, 1941, where he performed invaluable service in the program of culturing and propagating fish.

In drift fishing the bait or lure should hit bottom frequently. If it does not, the bait is not being fished deeply enough. The penalty of correct drift fishing is occasional snagging on the bottom, but it is the best way to produce good results.

Quote—

"Most people do not realize that waters should be as productive, acre for acre, as land, and of all the gifts of nature we have misused the waters most."—Jay N. Darling, president, National Wildlife Federation.

FLOOD WOOD FIRES

(*From Page* 11)

for a fire. He admitted afterward that he had thought I was crazy.

Two fuels can be depended upon no matter how wet the woods. Birch bark burns with a black oily smoke that can only be matched by the fat splinters of ancient pine knots.

Finding an overhanging rock with dry sand at the base which would serve to protect us from the rain we placed our tackle and soggy remnants of our lunch together with our catch under its shelter. Norman soon returned with a hand full of pine knots salvaged from a nearby pile of drift wood. A few curls of birch bark from a nearby tree completed our arrangements. Carefully I extracted the bullets from a half dozen shells and poured the powder on a bit of birch bark. Filling the revolver carefully I inserted a cartridge minus its leaden pellet and fired. There was a flash as the pile of powder ignited but the bark failed to catch. Twice more I tried then remembering about the wadding in the muzzle loader holding the flame I searched for a bit of dry cloth. Sacrificing a part of my undershirt which the tightness of my belt had kept dry, I cut a patch and carefully rubbed powder into it. A couple of threads carefully packed into another bulletless cartridge completed the arrangements. This time the experiment was a success and in a minute or two the flames leaped high. A piece at a time we dried our clothing and then foraged for some sound hardwood to add to our fire. A fretfull porcupine wandered down the mountainside and was shortly hanging from a birch near our crude shelter as extra emergency rations. The remains of our lunch plus half a candy bar supplied the backbone of our meal. A brace of trout nicely broiled comforted and cheered us immensely. Then just as the storm was ready to break our guides appeared, some what belatedly, having misjudged the fishing distance in their enjoyment of the day. As to their query about the odor of gun powder that hung in the air Norman gave an enthusiastic boyish account of the fire building process which served to bring on a good ribbing from our guides. This served in some measure to discount the discomfort of the second wetting of the day received while climbing wearily up the mountain to the car.

A loud hail from below breaks the chain of memories as partner climbs to my fire. We compare notes for a few minutes then carefully extinguish the last red embers of another flood wood fire.

Very young mussels, called glochidia, attach themselves to birds' feet and feathers and thus get a free ride to other waters.

FISHING PHOTOGRAPHY

Fishing Photos at Night

By Frank J. Floss

(Photos by the Author)

How time and photographic technicians have advanced the art of taking photographs at night, can be seen by comparing the old methods, with the new methods of taking photos after dark.

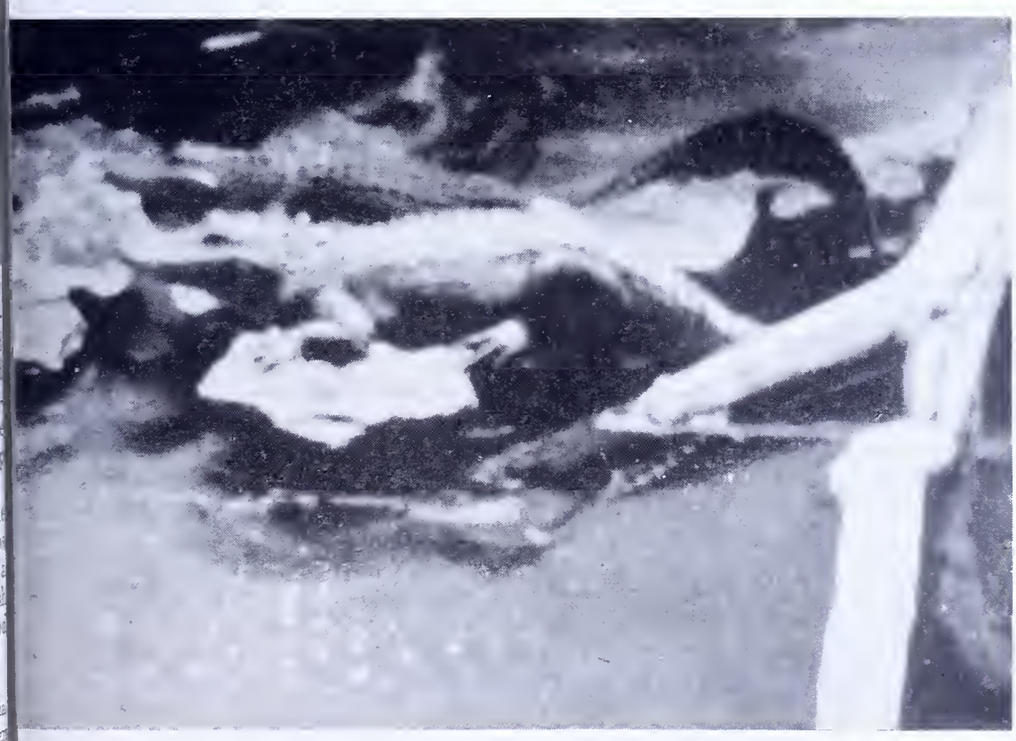
In the old days we who were more venturesome and not content with just taking daylight photos. Used to surround ourselves with tripods, flashpowder holders, flashpowder, igniters, and several other gadgets to get our night photos. We had to set our slow film cameras on tripods, get a helper to hold a lighted match for us to focus on. Then fill our flashpans with flashpowder, open the lens, pull the striker on the flashpan to ignite the flashpowder, and when the powder went poof, we hoped we had a photo. Sometimes we got our photo and sometimes we didn't. Often times we came back from a night of photographing without a useable photo. Often times too, we put to much powder in our flashpan and came back without any eyebrows or eyelashes, and a good singe job on our hair.

In those days it took about a half-anhour to just get set up for a photo. Today, however, it is a simple matter to insert a flashbulb in a flashgun, focus the camera with a focuspot, and get your photo in about one second.

Therefore, the "Fishing Photographer" who wants to take night photos on his after dark fishing trips should equip his camera with a flashgun and a focuspot. On the lake or on the stream a camera so equipped will at night produce for the photographer striking photos. They take all the guess work out of night photos, and if used with a fast film the photographer should 9 out of 10 times get just the photos he wants.

However, those photgraphers who own miniature cameras that have built in rangefinders and flashguns, but are not adaptable to the focuspot, can take night photos too, by borrowing a trick from the photographers of old. Simply get your subject (a fishing companion) to hold up a lighted match and focus your camera on it. When you have it in focus let your subject drop the match, then just press the shutter release as usual and you have your photo.

Also for night photos equip your camera with either a carrying-strap or carrying-case for safety, so that it will hang securely around your neck at all times. This will prevent it from slipping out of your hands in the darkness and falling into the water. Don't take chances with your camera, the few dollars you spend for a good case or carrying-strap will be money well invested, that will pay dividends by saving you the price of a new camera.



These amphibian reptiles were shot at night with a flash gun.



Moonlight on the sea—Nice, France.

Lack of Watershed Protection Caused Northwest Floods

Lack of fire protection on watersheds before 1935 has been given as the actual cause of widespread damage from last spring's disastrous floods in the Northwest, the Wildlife Management Institute just announced.

Watershed technicians found ample evidence that flood damage would have been less severe if millions of upland acres had not been deprived of their forest cover. Fire proved to be most important factor in denuding millions of the watershed acres, although improperly located logging, grazing, mine or smelter operations and road-building were other contributing factors.

On land now in national forests in the Northwest there are 5,126,000 acres that have been burned over, mostly before 1935 when the Forest Service began giving this "back country" intensive fire protection. The report points out that flood damage traceable to such lands, demonstrates the need for maintaining and improving fire protection and the wisdom of large-scale planting and re-seeding operations in basin highlands. Present-day logging operations were found by the investigators to have been responsible for only a small percentage of the heavy run-off of rain and melting snows. A warning was issued, however, that the same practices might prove dangerous if operations progress up the slopes into higher, more critical areas.

Striking evidence that forests slow the rate of snow melt and delay water flow was observed by the investigators. As late as June 14, about 14 days after the flood peak, timbered areas in the uplands still were blanketed with snow while nearby burned areas were snowless. In many instances burned and denuded north and west slopes, though normally cooler, had lost all snow while timbered south and west slopes still were snowbound. Another point brought out by the investigation is that, just as fires breed floods, so floods prepare the ground for future fires. Roads, trails, bridges, and telephone lines essential to the movement and direction of fire fighters and equipment, are out of service yet, with the critical fire season close at hand.

FISHING'S ODDS AND ENDS

(*From Page 7*)

neighborhood several years ago, and installed a large sporting goods department with a line of fine fishing tackle. I visited it, and asked the tackle clerk something about one of the rods. He replied that he hadn't any idea how it worked, and added that he couldn't understand why they had put him in the tackle department when he knew nothing about it, and hated fishing! He had never been fishing in his life. I never went back to that store. There's another one near it, and not one of the several clerks knows anything about the use of the tackle that they sell. The only reason I go there is because the owner — who also doesn't fish — is a friend, and I usually know what I want without depending upon the clerk's advice.

I've seen such clerks sell some of the strangest things to boys and even adults who are just starting out in fishing and don't know tackle any better than the clerks do. Such a clerk is utterly incapable of outfitting the beginner, whereas the beginner should be able to depend upon the clerk.

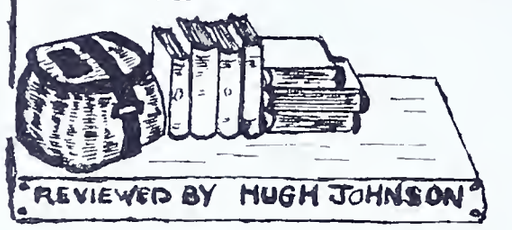
That reminds me of the boy I saw fishing one day. He was sitting beside a pool, intently watching the cork on the water, and I stopped to watch, too. Then I realized that I could see down into the water to the end of his line, which was about a yard below the cork, and I wondered what in the world he was using for bait. So I asked him, and he replied rather proudly that he was using a fly! And so he was. He was bait fishing with an artificial wet fly. I explained that you don't let an artificial fly hang motionless below a cork float in a pool, and demonstrated with my own wet fly. By sheer dumb luck I caught a small rainbow trout on the first cast and the boy was considerably impressed—and I was considerably surprised! However, I pretended nonchalantly that fly fishing was as easy as that.

What I am trying to get at is this: Outdoor magazines are missing a bet by not giving as a regular service the simplest and most elementary fishing instructions for persons who know nothing about it and have no experienced friends to guide them. I have seen beginners with fly rods trying to cast flies with bait-casting line, or trying to cast plugs with a 25-pound test rope for a line, and have actually witnessed a wet fly tied directly to a heavy fly line without using a leader.

Since these magazines must depend upon future fishermen for future circulation, it seems to me that they should devote a larger section to teaching the ABC's of fishing. Simple, basic things, such as the right way to put a worm on a hook, how to tell a fly rod line from a bait-casting line, how to rig up for minnow fishing and how to hook the minnow. If flies are discussed, why not colored illustrations of the flies mentioned so the beginner knows what they look like? The big magazines use color lavishly in illustrations, but I don't remember ever seeing a colored chart of the most popular flies in any of them. Such a chart would be helpful, and worth cutting out and saving. Some catalogues contain such charts, and they are saved for years. If a magazine advertised that it was carrying two pages of colored charts showing perhaps one hundred trout flies, I'll bet it would sell out that edition, and, furthermore, that the buyers would hang onto their copies for years.

Well, this has been a sort of mumbling to myself about various fishing matters, none of which is of world-shaking importance, but all of which enter into that most pleasant of outdoor sports.

WHAT'S NEW IN FISHING BOOKS



REVIEWED BY HUGH JOHNSON

A half dozen or more unusually good fishing books have come forth in 1948. Some are straight informational and how-to-do-it books, others are of the pleasantly discursive type, and still others are primarily funny-bone-ticklers. However, there is one book, published in August of this year, that must stand in the forefront not only in 1948 but for many years to come. Intrinsically important and basic, richly endowed with the personality and angling knowledge of its author, and warmly readable, it is priority reading for every trout fisherman whose love for his sport transcends the mere taking of fish.

This book is *A Trout and Salmon Fisherman for Seventy-Five Years* (Charles Scribner's Sons, New York) by Edward R. Hewitt, one of the giants of American fly fishing, and author of two previous books which have made their mark in angling literature. In 1922 he published a book called *Secrets of the Salmon* and in 1926 *Telling On The Trout.* For many years these books have been out of print, and I have haunted second-hand-book stores to try to get a copy of *Telling On The Trout.* I did finally locate a copy in a rare book shop but the price of it set me back hard on my heels and out the door. But I need hunt no more, for here is *A Trout and Salmon Fisherman For Seventy-Five Years,* containing all the material of both these angling classics, much of it rewritten and brought up-to-date, and a wealth of additional material—the product of the experience which Mr. Hewitt has had in the more than 22 years since he wrote the earlier books.

From the first chub he caught at the age of 5 to the trout that this 80-year-old angling gentleman catches now in Sullivan County (N. Y.) streams—75 years of more fishing in more different places and under more varied conditions than probably any man alive can lay claim to—Edward R. Hewitt has ceaselessly observed, studied, and analyzed trout and salmon and their habits and habitats, with the eye of the scientist and the heart of a man who loves his sport. The accumulated, intelligently and selectively digested angling knowledge of a life-time is generously passed on to us in the 364 pages of *A Trout and Salmon Fisherman For Seventy-Five Years.*

Some of Hewitt's most fascinating work, as told in his book, has been in connection with food habits of trout, why fish thrive in one stream and not in another and what fishermen and fish commissions can do about it. He gives us one of the best and most practical discussions of nymph fishing that I have ever read. His chapters on wet and dry fly fishing convince me among other things, that I have not been using small flies, 16's and 18's, in early season Pocono fishing, as much as I should. His comments on conservation are thoughtful and stimulating, and a man-size sense of humor provides warmth to every chapter. Of special interest to Pennsylvania anglers is the fact that about two-thirds of the book is about trout fishing and a fair share of this concerns the limestone streams that we know so well in this state.

The book is worth every cent of the price, and more. It is a volume, beautiful in format, and usefully illustrated, that you will return to again and again, each time finding something new to increase the rewards of your trout fishing and of kinship with one of the greats of American angling.

Hot Dog!

Trout can be fed frankfurters in a pinch Charlie Mykel, foreman of the Lake George N. Y. Hatchery, discovered this when his contractor fell down on fish food delivery during August's heat wave. All that the packers could supply was a quantity of over-rip hot dogs, but Mykel took them ground them up and cast them on the waters "Honest," he says, "it was a picnic. The fish ate like a bunch of Sunday tourists."—*N. Y. Conservationist.*

"It's the little things in life that tell,' said the sweet young thing as she yanked her kid brother from beneath the sofa.

Cigarettes are like girls: They com packed. They get lit, hang on your lips make you puff, go out unexpectedly, leav a bad taste in your mouth—yet they satisfy

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Mother: How do you like the new maid Son?

Son: I don't like her at all. I'd like t grab her and bite her on the neck, lik daddy does.

FLY TYING

(*From Page 5*)

Small bunches of this hair or fur are tied to form a streamer wing, bucktails, small hair wings, and of course can be used as tails on all types of flies. All hair can be obtained in dyed colors, red, green, blue, yellow, etc., according to the desired shades.

Tying Procedure

The methods used in tying the different classes of flies can now be easily understood since the tools required are understood, as well as materials, and different parts of the fly are known.

Dry flies, especially the small sizes of 12's to 20's are extremely difficult to begin learning to tie so the large streamer and bass flies should be attempted first. Assuming the essential tools and materials are at hand, let us place a large #2—4X long streamer hook in the jaws of the vise and clamp tightly. Cut a piece of thread three feet long and wax by means of drawing thread over a cake of wax. Tie the thread to the shank of the hook. Next cut a section from a wing feather or a small bunch of hair and hold the hair or wing feather section with the left hand at the end of hook (part which is in vise). Wrap a few turns of thread tightly around tail material and shank of hook. This forms the tail of the streamer fly. It is well to remember that all tails on all flies are tied this same way.

The next step is to form the body. Cut a small piece of chenille (3 inches) or material desired and wrap a few turns of thread over the material and the shank of hook. Once securely fastened, wrap the chenille or material used from the tail towards the eye of the hook. About a quarter of an inch from the eye stop and wind a few turns of thread around the shank of hook and chenille. Cut off remaining end of chenille. Thus, the body and tail is now constructed on the fly.

Next, some long bucktail hair or a few hackle feathers are placed over the chenille near the eye of the hook. Hold with left hand and with the right hand wind the thread tightly around the hair or wing material and shank of hook. In the case of the tyer being left handed, the material can be held with the right hand and left hand is free to wind thread around hook and material.

This bucktail is now finished except tying off the head and adding a few items to dress the fly more thoroughly if desired. Jungle cock shoulders can be added and a throat to represent gills.

Tying the head or tying "off" the fly is a very important step in fly tying. If it is not tied properly, the fly will not hold together under strain. The common knot used is termed the "whip finish knot". This knot is made by holding a tooth pick or needle horizontal in your left hand (or right hand in the case of a left handed tyer) about an inch over the eye of hook. Wind the silk around the needle and hook four or five turns. Pass the end of the thread through the loops and pull tight, drawing the loops smaller until they are tight against the hook shank directly behind the eye. This is the whip knot in its bare form. However, for speedier tying this knot, hold thread in left hand and make a loop with right hand. Note that the thread is crossed in back, not in front. Twist the loop and place over end of hook. After loop is over hook, repeat procedure of twisting loop, placing over hook. Do this four or five times, pull tightly and the whip knot is finished. Constant practice is needed for fast tying this knot. One versed in the tying of this knot can do the task in four to five seconds.

After the tyer has completed a number of flies and becomes skilled in streamer fly tying, his next step will be to progress to large bass and trout wet flies. These flies are tied in the same way as the bucktails and streamer flies. (See illustration of tying wet and dry flies). Wet flies are somewhat different from dry flies. They should be tied on heavy hooks so that they will sink readily when fished. The hackles should be long and soft, the bodies can be made thicker and bigger than on a dry fly. However, wet and dry flies are constructed of the same materials, as can be easily seen in the illustrations. Large wet flies should be made first until the beginner becomes acquainted with the steps and materials needed for good dry flies.

Cork or wood bass bugs need somewhat different materials. A hump shank hook is necessary so that the cork or wood body does not turn or twist. A slot is cut into the cork or light weight wood and the hook inserted and cemented. A tail is tied on and wings of either hair or feathers can be added after the cork or wood body is painted the desired pattern or color. Quick dry lacquers are best paints to use in coloring body.

Popper bugs or silent bugs can be made by either concaving (hollowing out the face) or shaping the face like that of a bullet.

The knowledge of fly tying is now known to you. Constant practice is the next step to success.



"I'm not sure whether it's legal or not, but let's see if it works."

Oklahoma Attacks Floods at Source

The Washita Valley Council of Soil Conservation Districts of Oklahoma on July 8 celebrated the completion of a flood-control project based on the idea that floods must be stopped at their source if they are to be stopped at all, the Wildlife Management Institute reports.

The project, the first of its kind to be completed, will employ approved soil-conservation practices to hold rain water where it falls. Supplementing the watershed treatment will be detention dams for any excess water from heavy rainstorms. Such methods have been advocated by conservationists for years in opposition to spectacular and expensive downstream dams which fill with silt when the headwaters of the streams are unprotected. Down-stream dams, at best, can do little but contain floods which already have started. They fail to strike at the basic problem and true cause—too much run-off from the land.

Under this new project the detention dams, the first of which was dedicated at the recent ceremonies, will be secondary in importance to the far-reaching soil and water conservation program on the watershed. Terraces and farm ponds were constructed, gullies were dammed or filled, sod waterways and windbreaks planted. Strip cropping and contour farming are being practiced by all farmers in the area. These modern methods hold most of the water in the soil as soon as it falls instead of permitting it to run off into the streams, eroding fields and creating disastrous floods. The detention dams are designed to retain any run-off in excess of the absorption capacity of the soil, the water to be released gradually over three or four-day periods. Because of the extensive soil conservation program on the watershed, little or no silting of the reservoirs is anticipated. Because of the principle involved in retention dams, no valuable bottomlands will be flooded as usually is the case with large down-stream structures. The Washita project, financed by a government appropriation of $11,000,000 was begun in 1944 under U. S. Soil Conservation Service supervision and includes 5,000,000 acres.

Pete: "Did that girl's dress fall off or am I seeing things?"
Paul: "Both."

DAMMING UP PA. RIVERS

(*From Page* 10)

mountain trout, were emptied of their fish, and ran black, filthy and malodorous, to the rivers, which thereby became befouled and, in many cases, almostly absolutely fishless.

What was true of the Susquehanna in those early days also was true of the Delaware River. Here, too, fish traps and other outrageous methods were used by fish-hungry folk. For miles above Trenton fish baskets were set one above the other until it was a mystery how a single fish managed to escape.

But fatal as these fish traps were to the continuance of the fishing industry of that early day by making it impossible for more than a small percentage of the mature fish to escape to the spawning grounds, they were far more so to the young shad on their way in the autumn of the year from the upper reaches of the river to the sea.

So delicate is the structure of the young shad that the loss of even a few scales means death. Into the fish baskets nearly every young shad was forced to go, and thousands upon thousands annually perished there.

As many as 50,000 dead young shad, it is said, were taken from one of the fish baskets at a time, and it is estimated that as many more fish as succeeded in passing through the slats died through injury to their delicate bodies.

The fish baskets were placed in the mid-channel of a stream, with long arms or wings made of stone, extending upon either side toward the shores. Every living thing carried by the current was swept into these baskets. It is said that parties owning baskets were obliged to shovel out with a wooden scoop the young shad that had accumulated in their baskets in less time than one night. Sometimes a whole cartload of young shad were shoveled from a single basket.

As an engine of destruction of fish, the set-net or fyke-net was surpassed only by the fish basket. The net was an elongated trap with a large mouth set directly in the current of a stream, sometimes with long arms or wings of stone extending out similar to the fish basket, turning the entire current through the net and sweeping into it every living thing carried by the current.

These nets required no attention and no labor. They were simply deposited and left to take care of themselves until the owner was ready to take them up and empty them of their catch. Occasionally along the large rivers a single man owned as high as 30 or 40 of these nets.

The bush seines, eel weirs, and the like, also were the means of destroying thousands more of shad. So great was this slaughter from the upper reaches of the river to tide water, that the shad almost entirely disappeared at places.

All along the Delaware the fishing fell off until in 1873 the fisheries at Milford yielded only a single shad. Not only did the number of fish caught fall off rapidly in the Delaware year by year, but their size appreciably decreased. In 1843 shad of seven and eight pounds in weight were by no means uncommon but 30 years later a four-pound fish was a curiosity. In 1843 and thereabouts 40 shad usually filled a pork barrel, while 30 years later it required more than 100 to pack a barrel to the top.

All of this causes one to wonder if shad will again ascend the rivers to spawn if present Legislative Studies and solutions of the State succeed in compelling the owners of dams to install fishways. If this does come to pass conditions paralleling those of pioneer days may exist again, providing the mammoth stream-clearance program continues to wipe out industrial and domestic pollution, thus purifying the waters of the Susquehanna River Basin and making it receptive to the aristocrats of the sea. When this is accomplished and feasible passage around the dams have been installed, then, and perhaps only then could shad-fishing once again become an important phase of our outdoor recreation and a source of food.

Protect Fishing Lines During Winter Months

"Fly lines should never be left on the reel during winter months, and a bait-casting line should never be dressed for winter storage," President Murray B. Angell of the B. F. Gladding Company, stated in offering the following hints to fishermen who want to keep their lines in the best condition for next season's fishing.

"Over the past 130 years, Gladding has tested every known type of line and all kinds of materials and coatings," Mr. Angell said, "and as a result of its research, and in answer to many queries from sportsmen, we offer these suggestions for lengthening the life of fishing lines and protecting finish and fibres:"

LINEN LINES: If a line has been used in salt water, it should be thoroughly washed in cool, plain water. At least three changes of water are recommended. Linen line should be soaked for several hours, then dried, preferably on a good line dryer, or spread out where warm, dry air can circulate around it. Be careful not to stretch or wind the line around any sharp edged object or rusty nail.

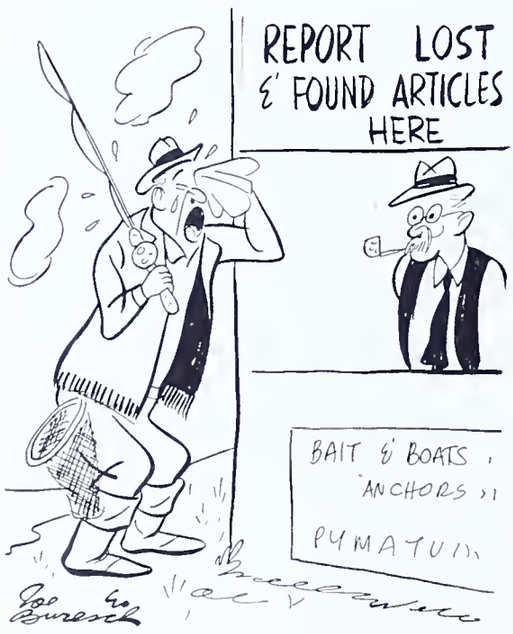
After thorough drying, it may be spooled, loosely, on the reel, and put away with the reel in a cool dry place. This treatment preserves the fine linen fibres and insures the line against rot and mildew.

FLY LINES (*Silk or Nylon*): In regard to fly lines, Mr. Angell stated that all fly lines, tapered or level, silk or nylon, have several coats of finish which must be carefully protected. They should never be left on the reel during the winter months nor for any great length of time because line left on a reel takes a "set."

It is a good idea to clean fly lines with a cloth dampened with a 25% solution of ethyl alcohol and water and then dry with a soft cotton cloth before putting in storage. *Do not* grease before storage and avoid getting insect repellents on fly lines as some will remove finish.

Fly lines should be unreeled and coiled loosely on a newspaper, or similar dry base. Large, wide coils are recommended. After uncoiling loosely on a newspaper, the best procedure is to either leave it coiled flat, or it can be hung from a thick *wooden* peg or beam, in a dry cool place. If it is hung from a peg do not overlap the strands, but spread them out as much as possible. Make several loops rather than a few long lengths. This way there will be less weight or tension on the "hung" line.

BAIT-CASTING LINE (*Silk or Nylon*): Speaking of bait-casting lines, this type of line should never be dressed with any type of solution before putting away for the winter. Wind loosely over a rolled magazine, wrap in newspaper to exclude all light and store in clothes closet or some other place of even temperature.



"A twenty pound northern pike—somewhere between the elm tree on the west bank and the old sunken log."

Nurse: Doctor, every time I lean over this soldier to listen to his heart, his heart beats increase. What should I do?

Doctor: Button up your blouse.

Suzie: Well, I finally got a raise in salary!

New Stenog: Honestly?

Suzie: Oh, don't be so inquisitive.

A woman flees from temptation, but a man just crawls away from it in the hope it may overtake him.

Earthworms In Winter Quarters

A Keen Observer Reports on the Habits of Creatures Which are Useful to Sportsmen as well as Gardeners

The lowly earthworm is one of the gardner's best friends. Unseen, it works day and night, ploughing, harrowing and fertilizing the soil.

It digs into the earth from 12 to 18 inches, although at times it may go as deep as 7 or 8 feet, and brings the subsoil to the surface, which is just what we do when we plough. It also grinds this soil in its gizzard, thus breaking it up as we do with our harrow. Its glands secrete lime that neutralizes the acid in the soil. The earthworm is truly an agriculturist, for it plants seeds by covering them with soil which it brings up from below the surface, and it cares for the growing plants by cultivating the soil around the roots. It provides enrichment by burying the bones of dead animals, along with shells, leaves, twigs and other organic matter which, upon decaying, furnish the necessary minerals to the plants. It even provides for drainage by boring holes which carry off surplus water.

The earthworm spends most of its time in the ground, where it lives in a burrow. The burrow, as a rule, extends straight down at first, and then winds about irregularly. Towards the surface the burrow is lined with a thin layer of fine, dark-colored earth voided by the worms. The familiar "castings" are formed with excreted earth and are made by the tail, which the animal uses as a trowel.

The earthworm cannot live in dry ground; it must have moisture. It does not like loose sand either, for it cannot build its burrow with sand grains, but must have materials with more plasticity. It thrives best in moist, well-aired soil that is rich in organic matter and that is neither acid nor alkaline. The most favorable times of year from the viewpoint of moisture and temperature are Spring and Fall.

On warm, moist nights of early Fall, we can find earthworms in large numbers on the surface of the ground, but with the first hint of freezing they disappear. At this time they do not go deep into the ground, but remain near the surface and reappear on warm nights. As cold weather gradually sets in, they go into the ground from 3 to 6 feet below the frost line, and gather by the dozens or hundreds in rounded chambers, huddling together in close-packed balls to conserve their moisture.

Here they remain until the Spring sun has completely thawed the ground, when they begin to reappear on the surface. Spring is the main breeding season, and on moist nights in May and June we may find hundreds of mating pairs within a few square feet of lawn or garden soil. The eggs are laid in yellowish-brown capsules, which are shaped like a football and are about the size of an apple seed.

The earthworm is strictly nocturnal in habits, and is not found outside of its burrow during the day unless "drowned out" by a heavy rain. During the day, when the ground is moist and warm, it lies in its burrows, extended full length, with its head uppermost and near the surface. It is in such a position that it is detected by some keen-eyed bird and sacrificed as a meal. You have doubtless seen, on countless occasions, some bird tugging away at a protesting worm, and perhaps you have even tried to pull one out of its burrow, only to find that this is not easy.

The reason is that the earthworm possesses numerous tiny, bristle-like projections or setae, which serve as anchors upon being embedded into the walls of the burrow. These setae, which are moved by muscles, are also used in locomotion, and serve the same purpose as the scales on snakes.

The earthworm moves about by a peculiar, crawling movement which is produced by two sets of muscles which are to be found directly under the skin. One set runs in a circular direction around the body, the other lengthwise. When the animal crawls forward, the anterior region is moved forward by the contraction of the circular muscles in this region. The anterior region is then anchored to the ground by the setae, which can be turned so that they point in the opposite direction from that in which the animal is moving, and a posterior portion is drawn up by the contraction of the longitudinal muscles. This portion is then anchored in like manner as the anterior portion, and a more posterior portion is drawn up.

For some reason, the earthworm cannot seem to find its way back to its burrow if it leaves, and so it anchors itself by its tail to the walls of its home while it stretches over the surface of the ground in search of food. It includes in its diet earth, leaves, flowers, raw meat and fat.

The earthworm has no ears, yet is sensitive to vibrations. If placed in a flower pot on the piano, it will draw back into its burrow immediately when a note is struck. It has no eyes, yet is very sensitive to light. If a beam of light is thrown upon it, it will "dash like a rabbit" into its burrow.

Darwin estimated that one acre of ground may contain as many as 50,000 earthworms, and that they may carry more than 18 tons of soil to the surface in a single year; while in 20 years they may transfer a layer of soil some three inches thick. He also speaks of a stony field which was so changed after 20 years that a horse could gallop over it from one end to the other without striking a single stone.—Massachusetts Horticultural Society.

He: Well, goodbye, dear, I'm going out of town for a few day; what's your phone number? I'll call you up when I get back.

Gertie: Plaza 2121, and if a man answers, you stayed away too long.

Don't worry if your job is small,
And your rewards are few;
Remember that the mighty oak
Was once a nut like you.

To The Editor

New Castle, Pa.

Gentlemen:

Here's news about Muskie fishing in this section of Pennsylvania that you may put in the Angler, I'm sure it will be of interest to many fishermen.

Ralph L. Canon of Sharpsville, R. D. No. 2, has caught in the past eight years 13 Muskies ranging from 7½ to 33 lbs. in weight.

The last one taken was on September 16,



Ralph Canon and his 33 pound musky.

of this year and measured 47 inches and weighed 33 lbs.

These fish were all caught in the Shenango River near Sharpsville, Pa.

There was another of 33 lb. caught this season, last year there were several large ones taken in the same place; one measured 53 inches and weighed 32 lbs. Why go to Canada when there are Muskies like that in Pennsylvania.

Will send a picture of the 33 lb. Muskie if you desire it.

Yours truly,
EDWARD L. O'NEIL.

An ordinary table fork can be used as a fish scaler. Hold the fork tipped forward and use short strokes.

A very small snelled hook baited with a strip of red cloth is a sure-fire frog getter. Just lower it in front of a frog for action.

Use a large tablespoon to scale fish. Keep the hollow toward the fish's head and the scales won't fly.

A real bring-home-the-bacon bass bait is a small bullhead or catfish with the horns, feelers, and fins removed (Use scissors.)

STREAMS HAVE CHARACTER

(*From Page 9*)

pockets on the alert for minnows or crawfish that may struggle out of the swift water at the first opportunity.

Shore-line shallows are good, but often neglected.

This is the habitat of minnows and of insects which fall off vegetation bordering the stream. Fishing in shore shallows can be so good that if the water is not too deep the fisherman can get fine action by wading up or down the very middle of the pool, casting his lures to the shores on his right and left. Rocky shores also provide pockets in which the fish can take up stations.

I remember one afternoon fishing a big pool on the north branch of the Susquehanna River with a surface plug. I was casting from a boat drifting slowly down stream about 30 feet from the shore, casting the surface plug toward the shore and retrieving it to the boat.

One particular spot attracted my attention. A combination of rocks and weeds formed a bay of quiet water about four feet long and perhaps two feet wide.

The surface plug was dropped in the center of this bay, allowed to ride quietly on the water a few seconds, and then gently twitched.

The water under it heaved on the first movement of the plug. There was a tremendous strike, and the water churned into a froth.

I had on a brand new casting line, but it snapped under the impact, and while I was in the midst of making repairs to the tackle a giant bass began leaping out of the water in the middle of the river, beyond the boat.

That was the bass that had taken my plug. I know because mine was fairly large and jet black—and I could plainly see it, in the bright afternoon sun, hanging from the jaw of the fish.

There is one other pool shallow of extreme importance—it is that at the tail of the pool, where it speeds up into another riffle. This is the most difficult of the whole pool area to fish successfully.

Fish cruise in the shallow tail of the pool when they are feeding. They go there to capture insects, minnows, and other forage. They risk shallow water, and they are extremely sensitive to any disturbance that may occur in the water, around them.

Veterans at this type of fishing follow one formula religiously. They wade carefully into a position where they can cover the water they wish to fish. Then they stand quietly for a period—long enough to smoke a cigarettes, for example—so that any frightened fish will have a chance to regain their calm, and only then do they begin fishing.

The tackle must be handled with extreme delicacy and care, for a single sloppy cast may frighten feeding fish within an area of many square feet, can even spoil a whole evening's sport.

It takes a lot of skill and patience, and considerable amount of experience, to master the art of fishing the tails of pools. But it can be done. And it is more reason why pools are the most fascinating part of any stream, large or small.

The water that separates pools—riffles and swift glides—will be the subject of the third, and final, article in this series.

(To Be Continued)

Idealist: I'd like to meet a girl who doesn't drink, smoke, neck, pet, use makeup, lipstick or dissipate in any way.

Pal: Why?

The Warden Is Your Friend

If you lose or forget your bobbers, substitute the lamp from your auto headlight.

If your feet blister easily in outdoor footwear rub the inside of your socks where the blister occurs with yellow laundry soap.

Strong cider vinegar or lemon juice will reduce the swelling and relieve the itching of mosquito bites.

A handy hook and knife sharpener can be made by gluing strips of fine and coarse emery cloth to the sides of a two-inch length of lath.

You can waterproof woolen garments by going over them lightly with a cloth dipped in Lanoline.



Photo by New Castle News

Veteran fisherman Scott McCaslin (right) and a 36½ pound musky he took this past season, one of the largest fish taken from the Shenango River. The fish was 49½ inches in length. A live chub was used as bait. With Mr. McCaslin during the 20 minute battle were Paul Tillia and Ralph Grove.

PENNSYLVANIA'S
ANTI-POLLUTION PROGRESS

Abatement of Pollution Will be Factor in Conserving Water

Abatement of pollution of the waterways under the Clean Streams program of the State Sanitary Water Board will bring about essential conservation of water supplies, Dr. Norris W. Vaux, Health Secretary and Board Chairman, has declared in pointing out that water of good quality can be re-used in many cases, thereby reducing the necessity of draining underground supplies. In an increase number of areas, it is stated, there is evidence that the underground supplies are deminishing greatly because of the increasing drain being placed upon them and in some cases, municipalities and industries have been required to locate new sources of supply.

"There is probably little realization of the daily water requirements to support life and industry. The volume is beyond comprehension. Because of the polluted condition of many of our streams, great volumes of surface water are not used to the extent which would be possible if the water were of good quality. That means shameful and serious waste of natural resources since because of that condition increasing dependence is placed upon underground supplies and they now are being drained, at least in many cases, to a dangerous extent."

It is pointed out that for domestic purposes alone the daily requirements in this State amount to more than one million gallons. This is equal to the flow of the Susquehanna River over a six-hour period at Harrisburg during the average dry weather season. The volume of water required for the operation of industry, it is pointed out, reaches staggering figures. Abatement of pollution of the streams would permit of the re-use of great volumes of surface water for which underground supplies are now substituted because the polluted water cannot be used for the required purposes.

"Aside from the fact," Dr. Vaux declared, "that clean streams are necessary to safeguard health by eliminating hazards to public water supplies; that clean streams are essential for the promotion and maintenance of the public welfare by assuring adequate supplies for industry, that clean streams are actually the heritage of all the people for recreational purposes and fishing; the Clean Streams program is vital in that it will bring about conservation of our water supplies, the greatest of our natural resources."

Industry Derives Benefits from Waste Treatment Systems

The requirement to abate pollution of the waterways under the Clean Streams program of the Sanitary Water Board is not causing expenditures to be made by industry as a service to the public welfare alone, but in innumerable cases throughout the State, industry is deriving definite benefits for itself through the installation of waste treatment systems.

Many industries are finding as the result of studies and surveys which are necessary to prepare plans for waste treatment, that improvements can be made in some stages of manufacture to bring about reduction in the volume of wastes. In many cases the waste volume is greater than necessary because established routine is followed and studies are not made of the possibilities of improvement. It is also frequently found that leaks of various kinds can be prevented through greater care in operation and that changes in processing to decrease the volume of polluting waste result in greater efficiency.

In a number of industries the surveys disclosed actual waste of valuable materials which could be saved by process changes and by showing employes how more care can be exercised in various operations to bring about reductions in the volume of final waste waters.

Decreasing the volume of wastes, frequently resulting in reclaiming valuable materials which formerly went to the streams, and greater vigilance over processing operations in which wastes are produced, is termed 'good housekeeping' by the Bureau of Engineering of the Health Department. All industries are urged to make a survey of their waste producing operations in connection with their studies of methods for waste treatment. By reducing the volume of polluting wastes the cost of installing treatment systems is necessarily reduced.

An example of 'good housekeeping' results is seen in the waste treatment standards adopted by the Board for the milk industry. In this instance studies to improve operations as recommended by the Bureau of Engineering were made on an industry-wide basis by the industry's engineers which resulted in developing many 'good housekeeping' methods which are recognized in the adopted standards.

Industry is recognizing that the Clean Streams program is not imposing an unfair burden but that benefits are derived in many instances through the treatment of wastes in addition to the fulfillment of the obligation to the public welfare in abating pollution of the waterways.

Engineer From Sweden Studies Treatment of Industrial Wastes

Ingmar Gullstrom of Stockholm, Sweden, senior consulting engineer to a Stockholm engineering firm and to his government, visited the Bureau of Engineering, State Department of Health recently to learn about methods used in Pennsylvania for treatment of industrial wastes under the Clean Streams program. He had made arrangements previously through the Royal Consulate of Sweden in New York for his visit to this State for the purpose of making a study of industrial waste treatment. Arrangements were made for him to visit a number of industries of various types where treatment works are in operation.

Board Investigating Source of Bad Tasting Drinking Water

An intensive investigation is being made by the Bureau of Engineering, State Department of Health, of obnoxious tastes in public water supplies secured from the Ohio River. The condition prevails mostly in communities in Ohio, but the investigation being made is to determine if the cause, believed to be from phenolic compounds, originates in this State.

Under a ruling of the State Sanitary Water Board it is not permissible to discharge any phenolic bodies into the public waterways of the Ohio Basin. That type of pollution comes from by-products of coke and chemical plants.

Investigations have been completed on the Allegheny, Monongahela and Beaver rivers, no condition which would cause the situation has been found along those waterways. Investigations are now being made along the Ohio River.

Board Accepts 3 Companies Waste Disposal Agreements

Steps taken by three industrial concerns have been accepted by the State Sanitary Water Board as compliance with its order for abatement of pollution of the waterways under the Clean Streams program.

The Pullman Manufacturing Co., Latrobe, has notified the Board that it proposes to discharge all waste waters to the Latrobe sewer system. This proposal was accepted upon condition that an agreement between the company and the borough in which the borough accepts the sewage and industrial wastes from the company plant into the borough sewer system, be filed with the Bureau of Engineering.

Compliance by the Sterling Steel Foundry Co., Braddock, Allegheny Co., is based upon similar action by that company. The storm water and settled water from the property of the company will be discharged to the sewer system of Braddock under a stipulation by the borough that water other than storm water or sanitary sewage entering the borough's sewers shall be free of sedimentation which shall be accomplished by the use of two sedimentation basins, the overflow of which shall enter the sewer system. The Sanitary Water Board has required that construction of the basins and connection with the borough sewers shall be begun at once.

The Philadelphia Suburban Transportation Co., Haverford Township, Delaware Co., was given the compliance notice after filing an agreement with the Buerau of Engineering between the company and Haverford Township in which the township agrees to accept the discharge of the industrial wastes from the company into its sewer system after pre-treatment in a grease trap and settling tank. The pre-treatment system was placed in operation last March.

STRANGELY ENOUGH!



BY USING A POWERFUL MICROSCOPE YOU CAN TELL THE AGE OF A FISH BY READING THE GROWTH RINGS IN THE SCALES. THE RINGS ARE LIKE THE ONES FOUND IN GROWING TREES.

owen PENFIELD FOX.

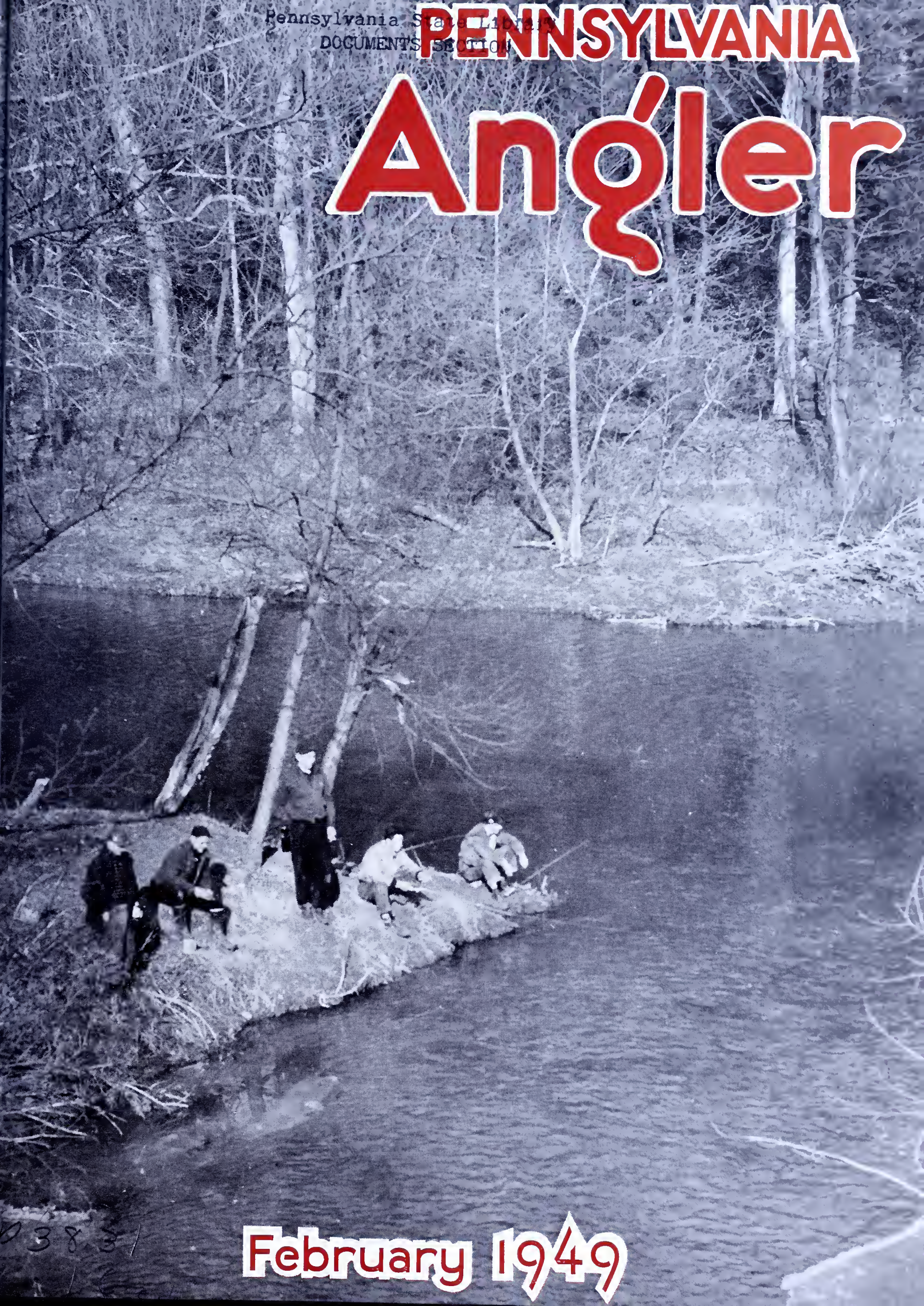
← TREE RINGS.

ALL OF THE NATIVE **CATFISH.** HAVE EIGHT BARBELS OR FEELERS.



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COMMONWEALTH OF PENNSYLVANIA
BOARD OF FISH COMMISSIONERS
HARRISBURG, PA.

The Angler

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The Cover . . .

is a photo by the outdoor writer, Hal H. Harrison. The shot was made on Buffalo Creek near Freeport, Pa. The ice on the edge of the creek will attest to these being amongst the first sucker fishermen.

State Fish Wardens

The following is a list of all Regular State Fish Wardens. The names and addresses are printed here so that any fisherman wishing to contact his local warden in the furtherence of his sport may do so.

Name	Address	Telephone
Ahrens, Julius	Star Route #2, Oil City, Venango Co. ..	55504
Aley, Kenneth	173 W. Main St., Galeton, Potter Co. ..	159
Bachman, Floyd	49 Broad St., Stroudsburg, Monroe Co. .	449
Bailey, Ross C.	230 W. Main St., Youngsville, Warren Co.	2-2181
Banning, James H.	Connellsville, Fayette Co.	946
Barnhart, B. F.	R#1, Elizabethville, Dauphin Co.	34R23
Bidelspacher, C. A.	302 E. 3rd St., Williamsport 18, Lycoming Co.	2-4561
Britton, Wm. W.	R.D.#1, Chambersburg, Franklin Co. .	1437
Chrisman, R. J.	Kushequa, McKean Co. ... Mt. Jewett	4648
Cloos, Leland E.	Middlebury Center, Tioga Co.	4-R-31
Close, L. E.	RD#2, Emporium, Cameron Co.	6931
Cole, Harry Z.	877 Cherry St., Norristown, Montgomery Co.	2335
Corbin, Harold	215 Washington St., Huntingdon, Huntingdon Co.	292W
Cross, George	Hammersley Fork, Clinton Co., Renovo	915-R-14
Dahlgren, David	Philipsburg, Centre Co.	317
Davis, Dean R.	S. Main St. Extension, Box 67, Punxsutawney, Jefferson County	841-R
Foor, Earl	Breezewood, Bedford County	29
Greener, Robert M.	549 Howard Ave., Lancaster, Lancaster County	28603
Harter, Keith	Dalton, Lackawanna Co.	100
Henderson, Sam F.	R#2 Greensburg, Westmoreland Co. ..	2684
Hill, Rayel	Bowmanstown, Carbon Co., Palmerton	4228
Iman, Clifton	115 Wahl St., Evans City, Butler Co. ..	3374
James, George H.	65 E. Louther St., Carlisle, Cumberland County	708
Johnson, J. Albert	12 Hobson Place, Bradford, McKean Co.	4362
Jones, Minter C.	238 W. Garrett St., Somerset, Somerset Co.	347
Lech, Anthony J.	420 Hess St., Schuylkill Haven, Schuylkill Co.	566
Litwhiler, Charles	Numidia, Columbia Co.	2734
Long, Charles V.	East Waterford, Juniata Co.	
McIlnay, William E.	E. Waterford	15
Neff, Harvey D.	445 E. Pitt St., Bedford, Bedford Co. ..	471
Noll, G. Max	220 N. 8th St., Allentown, Lehigh Co. ..	7063
	2 Church St., Montrose, Susquehanna County	149-M
Noll, Leroy	Pleasant Mount, Wayne Co.	Hatchery
Ogden, John S.	242 E. College Ave., York, York Co. ..	7434
Ogden, Lester C.	502 Park St., Clearfield, Clearfield Co.	59392
Ottaway, Frank L.	70 E. High St., Union City, Erie Co. ...	375J
Pyle, Horace A.	RD#2, Coatesville, Chester Co.	2738-J-2
Reynolds, Harland F.	4 Spruce St., Tunkhannock, Wyo. Co.	6297
Rice, Edward L.	218 W. Green St., Waynesburg, Green County	398
Schadt, John A., Jr.	Lake Ariel, Wayne Co.	2051
Shearer, Clarence	Freeport, Box 285, Armstrong Co.	282
Sheldon, Carlyle	Conneautville, Crawford Co.	125-B
Singer, Ralph O.	Tafton, Pike Co. ..... Hawley	226-R4
Snyder, Arthur S.	RD#1, Mifflinburg, Union Co.	6220
Walker, Arthur L.	143 N. 8th St., Indiana, Indiana Co. ...	1646
White, Clinton B.	445 E. Neshannock Ave., New Wilmington., Lawrence Co.	240-M
Wilcox, Paul D.	Wyalusing, Bradford Co.	147
Womelsdorf, R. J.	241 Pierce St., Kingston, Luzerne Co., Wilkes-Barre	7-5836
Wounderly, W. E.	615 Eisenbrown St., Reading, Berks Co.	2-7181

A trout stream without any trout is like the play of Hamlet with Hamlet left out

Killing Less Means More Fish

By Donald S. Shiner

A CAR came tearing into the driveway and following was a long series of 'toots' on the car horn. I was just finishing a cup of coffee and glanced out the window for a possible answer to the sudden noise, then I recognized the car as that of Mel King's. I went to the door to admit Mel, and as he came upon the porch, he displayed 10 beautiful trout. Indeed, all were a foot or longer in length, and each a masterpiece in colorful markings.

"Fourth time this week that I caught the limit. The Cahill fly is really paying-off on Fishing Creek this year. Well, gotta be going, I thought I'd drop in a few seconds to show these to you," Mel remarked.

Back in the house again, I continued to think of Mel's catch. He had caught the limit of trout four times this week, and that goes on all through the season, that is, if Mel can find enough fish in the nearby creeks. I knew Mel King (of course not his real name) long enough to realize that if Mel knew a trout was in a certain pool, he had little rest until he had outwitted the trout and had it finally creeled.

I knew of creeks that Mel frequented, once abundant with trout, but now it was a lucky day if even one specimen could be found. Mel as an individual was only partly to blame, there are thousands of anglers who are in this same category and have directly contributed to the fishless streams in Pennsylvania.

Call Mel an expert fisherman; a man who has attained the goal so many seek; a real sportsman? Brother, in my opinion, he's nothing more than a 'fish hog'; a parasite; and one of the sinister forces which are wrecking conservation programs; and last, a fellow who is actually robbing *you!*

Even though by law Mel is entitled to limit catches of fish, think of the hundreds of thousands of anglers in Pennsylvania, if each one were to capture his limit dozens of times during the year. Do you realize how many fish it would require? It would total in the millions!!



The author holding the beautiful brook trout he has landed 11 times.

In the remaining clean streams there is less than 100 feet of shore-line for every fisherman. This much space can not produce hundreds of fish, yet it is required to do that very thing when anglers persist in taking limit after limit catches.

In this day of atomic impulses, high speed relativities, and stampede tactics of anglers, hardly is there standing or elbow room along the stream. Each sportsman is after the limit catch of trout, even if it means taking the trout from a neighbor's hook. It is with regret that I say the overwhelming majority of men who fish are interested solely in killing *more* fish. I am convinced that each regard fish solely as something to be killed without regard for tomorrow. Yet, while the fish are near depletion, the cry is for more stocked fish. It is then purely a matter of beating the other fellow to the freshly stocked pools. No sooner are the fish dumped into the streams, than anglers swoop down like vultures. Every last fish is jerked mercilessly from the water and dropped into the willow creel in a matter of minutes. Once the pool is barren of fish, the stampede of anglers move to the next pool and the same tactics are employed. If another angler comes within rod range of the pool, he is damned to the lowest possible depth. It seems today it is actually a crime to allow one fish to slip from your grip into the possession of another angler. An under size fish is torn from the hook and tossed disgustedly back into the brush. And after one angler succeeds in obtaining the limit, it is a brilliant stunt to hurry home, pass the fish around to the neighbors, and then journey back to



The Fish Commission stocks fish by the millions. Unless conservation is practiced by the state's sportsmen in their catches and taking of bait from the streams these fish will amount to little in the overall amount of sport they provide. On the left, stocking fish in the Susquehanna River is state fish warden Robert Greener, his helper is Mr. Arthur Fox, secretary of the Southern Division of the Federated Sportsmen.



The biggest thrill in angling is to outwit and finally landing a good size trout.

the stream that same day for another haul! Not being content with this alone, the haul is long remembered and bragged about among angling circles.

It seems today success is measured by heavy creels of dead fish.

I know a great amount of fishermen or 'so called sportsmen,' who are really experts with a rod and reel, yet I can honestly only count on my one hand the few that would not exceed the limit, or refrain from killing only half the legal catch. A great percentage of the fishermen only obey the fishing laws because they have fear of being caught. Yet these very men who cherish the sport of angling, wonder why there are few fish today. They shout that Fish Commissions are politically corrupt; methods of stocking fish are all wrong; and about the limited amount of miles of free fishing waters.

How many anglers do you know who spend time in stream improvement? How many sportsmen refrain from taking the limit amount of fish? How many men are actually interested in preventing further pollution of streams?

Don't write me a letter, I can tell you. It's like shoveling snow with a pitchfork to find a lost ring. Outside of a few individuals and the handful of conservation groups, you're lucky if you know just one fellow who practices conservation!

The misconception today is that the majority of men who fish are decent, fair, law abiding, and conservation-minded individuals. I only wish this were true! Perhaps you may think of what I write as being exaggerated. However, look over the territory you are acquainted with, is there plenty of game fish in the streams? Do men refrain from digging "hell" out of a stream in hunting for nymphs, hellgrammites, minnows, and other fish foods? And how many fellows merely help to stock fish so they are in the 'know' and return immediately with rod and reel? I am afraid our fishing will be a has-been unless a few things are adhered to immediately.

Our fish today are costing us $5.00 to $10.00 a pound. Surely the sportsmen would object paying this amount for fish or meat at the corner grocery store. Then it must be admitted that fishing today is only known for the sport it can give. Wasteful killing of fish by constantly taking limit catches reduces future sport not only for other anglers, but for yourself!

Think of the pleasure obtained when a large rainbow trout rises to a dry fly and gives some sensational aerial acrobatics when it feels the sting of a penetrating hook. The only desire, and quite natural too, is to land it. Go ahead—fight it out with that trout; land it; admire it; even photograph it; but then, gently unhook the trout and allow the rainbow to return to its favorite location. That trout gave you some rare and wonderful sport and as its reward, why kill it? Are you really that starved for fish or food? Think how wonderful it would be to know that on a return trip tomorrow that trout will be in almost the same location waiting for another dry fly to come floating down stream. Chances are you could battle it again. Isn't that more important than killing it and have it dead forever?

On one trout stream, a favorite of mine, I have caught a 14 inch brook trout a total of 11 times. Imagine battling the same trout 11 times! I dare say that brook trout is my pride and joy, and I'm more concerned about it than any other trout in that entire stream. Capturing it 11 times was over a period of two years. It undoubtedly is the same trout as a large notch is cut in the dorsal fin. If I were to have killed it the first time it accepted my dry fly, think of the sport I would have never known. Indeed a 14 inch brook trout is a handsome fish to any one, and I am afraid some angler one of these days will capture it and probably announce in a local newspaper that he successfully outwitted the beautiful charr.

By that I don't advocate the freeing of every trout or bass caught—far from it. But it's time to realize less fish dare be killed? Kill only half the limit, or only enough for the family needs. No one looks down upon the fellow who takes his limit of trout but only has a chance to fish a few times a year. The individual who insists on taking limit catches three or four times a week is the one who does the damage.

Conservation Can't Wait

You'll never regret the fish you put back in the stream. It gives a feeling of pride; of contributing to your fellow angler's sport; and that of helping the prevention of a soon barren earth. The fish you put back in the stream will give sport again not only to you, but to some other angler. Who knows, the very fish you place in your creel may have been hooked half a dozen times by other anglers and always released. If this had not occurred, you would not have had the chance to battle it.

Truly, releasing many of the fish you catch is one of the most pleasing experiences you've ever tried.

There is much to be done. The survival of fishing in Pennsylvania depends upon each individuals acceptance to do his part. We must kill less fish and return many of the fish we catch back into the stream. The smaller members of the fish clan dare not be destroyed so wastefully. Gathering bait from the streams and depriving fish of food must be cut to a minimum. Fish can be stocked by the millions, but unless there is enough available food, only a small percentage can survive.

It is up to you, to each and every one of us, to practice good conservation. Return more fish to the water and they will give you another battle another day.

This must be done, or our fishing will pass to oblivion within the next few years! Why not leave the creel at home?



Game fish give rare and wonderful sport, as its reward why kill it? Releasing that fish once it has been landed will allow him to give battle again.

Lumbricus Takes a Bow

By N. R. Casillo

SIMPLY because an individual loves to watch a couple of gallant fighters batter each other's faces into the semblance of something fit for a plastic surgeon's deft skill, does not necessarily imply that he is incapable of appreciating the exquisite nuances of a Beethoven concerto. The analogy is as readily applicable to fishermen, for those intangible and yet, palpable factors that are so great a part of any kind of angling so long as it is done with equipment fitting the occasion and the fish are omnipresent whether one uses the lowly worm or a dainty fanwing.

I like to think of the gentle art as did Izaak Walton, a sport wherein one may come in contact with things out-of-doors in the company of genial companions; where one may indulge in quiet talk or "study to be quiet," as fancy dictates. Some of the most pleasant hours of my life have been spent fishing for the grinning, bewhiskered bullhead or the guttery sucker, and yet, the sibilant swish of a tapered line as it uncoils from the backcast is not an unfamiliar sound to my ears. So, what does it matter so long as a fellow is fishing?

Admittedly, fly casting is an art, and many an angler would prefer to land a solitary fish enticed by a Greenwell's Glory than a dozen through the medium of baser lures. Yet, frequent are the times when a lusty night crawler would have saved the day; although it may be more logical and "sporting" on such occasions to dismantle the outfit and call it a day.

On a trip last season to Warren county we fished the Caldwell for two solid days without getting a single rise. On the second evening while en route to Pleasantville we paused at a service station. One of a group of hangers-on loafing about the place asked the inevitable question.

"No luck," I answered.

One of the men, a slight, bent old chap, leaned toward me and bluntly asked: "Be you wanting to ketch some?"

"Why, of course," I faltered, wondering if the ancient cut-up was setting the stage for a joke at my expense.

"Wal," he continued, "'bout half a mile down the road and jest off to the right, the railroad bridge crosses the river. Go down to the riffle below the bridge and lower a gob of worms. Ye'll get 'em as long as yer arm," he concluded with a decisive smack of his toothless gums.

"Did you say as long as his arm?" asked George Short my companion, poking his head out of the car window.

In answer the volunteer informer grinned and pivoted his owlish face in turn toward the expressionless ones of his companions; a gesture as eloquent as if he had said: "Aint that right, boys?" And that was all the encouragement we needed.

By the time we had eaten a couple of sandwiches and assembled our outfits it was dark.

"Don't forget the worms," reminded our new friend as we started off down the road.

"Worms?" snapped George.

"Yeah—worms," I answered sheepishly.

"Better take some with you," the old man urged.

"We don't have any," I ruefully replied.

"I can fix you up," the station attendant broke in. So, much to my companion's disgust, I slipped a tobacco tin full of night crawlers into a pocket of my fishing jacket.

We had no difficulty in locating the bridge even though we could scarcely see ten feet into the night. The stream at this point was of the same character as it is throughout much of its length; a fairly heavy current passing over a mixed bottom that is wadable in most places. Our flashlights disclosed a series of attractive riffles for some considerable distance above as well as the one indicated below the bridge.

"Think I'll try a feather minnow," said George as we cautiously felt our way through the water.

"I'll make mine a thin bucktail," I said absently, finding it difficult to side-track the "gob of worms."

George stopped at the head of a riffle while I continued on down some twenty yards farther. After a survey of the locale I snapped off my flashlight.

After my eyes had adjusted themselves I swung into action, executing several false casts to get out sufficient line and to overcome if I could, the strange feeling induced by the unusual conditions, murky darkness and an unfamiliar stream bottom.

At last I slanted the lean bucktail across the current, waited a moment and then started working it toward me.

"Ker-SMACK!" A ponderous splash sounded from out of the darkness.

"Is that you George?" I enquired.

In answer there was another splash followed by an explosive remark from George. "Me nothing," came his delayed reply. "Those sounds were made by whales taking cuts at my minnow."

Right there I resolved to change to a feather minnow and began retrieving my lure. Just as I was about to reach out and attempt to locate my line, there was a heavy surge seemingly in the im-



Twilight among the hemlocks. If you have never fished for trout at night, then, you've something to look forward to. It's packed with excitement, sport and fun.



Back of that brushpile on the Caldwell was ensconced a 30 inch brown. This according to Ross Bailey, Warren county fish warden. He hooked and lost it twice!

nediate vicinity of my legs. Indeed, water splashed my face.

"Thunder!" I gleefully cried, "we're being surrounded." And I lashed out once again with the bucktail.

Well, those fish continued striking short for about ten minutes longer and then quit altogether. In that interval I made quick changes to several lures and even snipped the tails from a couple of those eliciting the most attention. Nothing availed.

"What do you think of this for a fine kettle of fish?" cried George after an inactive spell of some length.

"Lousy," I agreed. "What did you use besides that minnow?"

"Everything but the disgorger,' he came back. "Let's have a smoke."

"Wait a minute," I replied as I pulled the can of worms from my pocket.

It was only the work of a moment to strip what few hairs remained on my bucktail and slip two worms on to the 1/0 hook, impaling each one twice so as to form a couple of loose loops and four ends, all dangling enticingly. From the impetus of a gentle swing the "gob" landed in the middle of the riffle. The scarcely audible splash was followed immediately by a resounding smack and I sank the hook. It was that easy.

"Whoopee!" I yelped as that fish started going places; for it swung into the current and careened upstream like a broken-field runner. At the application of a little pressure he reversed his field and tore back down as if intent upon breaking records—and tackle. In each case I was cognizant of the movements only after they had been executed. Fighting a large fish in the dark will justify the most vivid imaginative picture and then some. It was useless to employ orthodox tactics so I merely attempted to keep a tight line, hold the rod at the most advantageous angle and trust to luck. An eight-foot leader and a four-ounce rod are fragile weapons even when using worms. In fact, a little too fragile for nocturnal forays if your ticker isn't up to par.

At this point George arrived on the scene thinking he might be of some help. "Is it a big one?" he excitedly enquired.

My answer was a wild whoop, for the fish took another run and punctuated it with a couple of savage tugs. I could feel the pulsing body through the taut line as he battled the current and the restraining pressure of the rod. Then the tense body suddenly relaxed and was swept away by the heavy current. I reeled rapidly, sickened by the possible implication of a slack line. Upon again feeling the solid weight of the fish at the end of a tight line, I thanked my stars and yelled for light.

When the dazzling beam of my companion's flashlight slashed the darkness and disclosed the fish in the shallow water, he gave a low cry and I started trembling with apprehension.

"Here, I have the net," croaked George, nearly choking with excitement. "Ease him over this way and take it easy. Boy, oh boy, what a fish!"

Gradually I dragged the big brown toward the waiting net, an altogether agonizing process. But at last he was within striking distance and George had him with a well-timed swoop.

From the safety of the high bank we dispatched and weighed the fish and then laid the gleaming body on the dewy grass.

"Three pounds even," muttered George with satisfaction as he puffed a cigaret. "That's something."

"And how," I managed.

"Say—what did you get him on?" he asked suspiciously.

"Lumbricus," I readily admitted.

"I thought so. Do you have any more?"

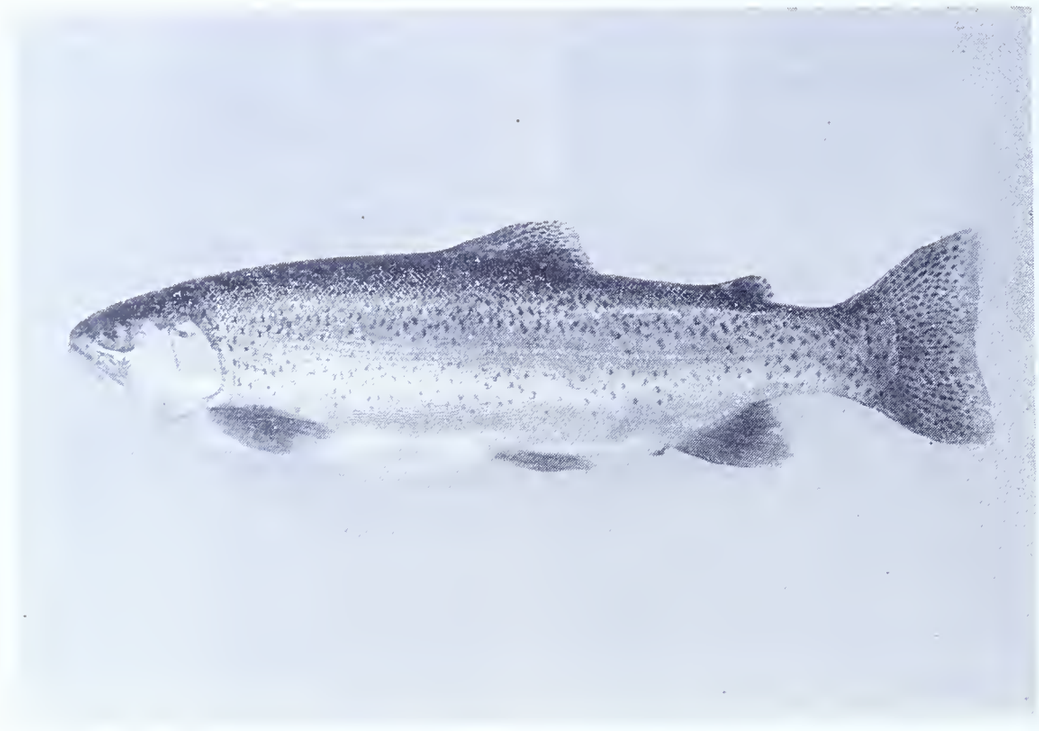
"Nearly a full can," I replied as I passed it to him.

After extracting a liberal handful of

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Worm fishing for trout in late summer when streams are low and clear, taxes the skill of the most expert angler. That's George Short, one of the most expert.



THE RAINBOW TROUT

Heddon Fish Flashes

Edited by

LOU S. CAINE

THE robust rainbow trout is not only one of the most beautiful members of this romantic family but also one of the most spectacular and satisfying performers. Its fast and powerful runs interspersed with breath-taking jumps make it a favored individual with veteran trout anglers.

For many years the rainbow trout has been confused with the steelhead trout and until recently the rainbow and steelhead were regarded as two separate species. Scientists now agree that these are one and the same fish —the steelhead merely being a rainbow that has migrated to sea.

In the past, it has been a general custom to call any trout that has migrated to sea a "steelhead." This included cutthroat trout, Dolly Varden trout and even Eastern brook trout. To remove confusion it is recommended that the term steelhead be reserved for rainbows, and rainbows alone, which have migrated to sea or larger bodies of water.

Rainbows that migrate from streams and rivers to large landlocked freshwater lakes are called steelheads in some seetions of the country. The rainbow, including the steelhead clan, is the most widely distributed member of the trout family.

The rainbow trout is sometimes misnamed California Trout, Coaster, Coast Range Trout, Hardhead, Pacific Trout, Salmon Trout, Steelhead and Steelhead Salmon.

The rainbow possesses the migrating instinct more than any other trout, and does not like to "stay put." This, coupled with the fact that it can survive in warmer water than many other trout, accounts to a large extent for its wide distribution.

The color of the rainbow trout found in freshwater streams and rivers varies greatly but is generally a bluish or olive green above the lateral line, shading into a silvery green on sides. Sides, tail and dorsal fins are profusely spotted with small dark spots. A wide lateral band of lavender red runs along the sides from head to tail. Lower fins are dusky or whitish.

When the rainbow migrates to sea and becomes a "steelhead," the vivid freshwater coloring fades, the entire fish assumes a light, steel-blue or silvery sheen and the dark spots become quite indistinct. The sides take on a pinkish cast and the bright coloration of the lateral band is not so conspicuous. Upon returning to fresh waters the "rainbow" markings again appear.

While the rainbow trout originally was a westerner, found only on the Pacific slope of the Sierras, from California to Alaska, it now has been successfully introduced into nearly all states except the southern part of those bordering the Gulf of Mexico.

Due to the fact that its eggs stand shipping unusually well, it has been successfully transplanted in Europe, Asia, Africa, Australia, New Zealand and South America. The sizes and numbers of rainbows taken in New Zealand and Chile are astounding.

Although the rainbow prefers the larger swift-flowing streams of the West, it does nicely in the smaller streams of the East, provided they have fast water and are not too small. The rainbow loves swift water and will be found in the fast stretches rather than the slow-moving currents.

Fish for them at the edge of strong currents and at the head of rapids or under overhanging banks where the current is swiftest.

The world's record rainbow, caught on rod and reel, was taken by Wes Hamlet in Pend d'Orielle Lake, Idaho, Nov. 25, 1947. It weighed 37 pounds.

The size of the rainbow depends almost entirely upon the waters from which it is caught. On small streams the average will approximate 1 pound. In larger streams and rivers, or fair-size lakes, the average weight will be 2 to 4 pounds, and 5 to 6 pounders are not rare.

Sea-run rainbow, or steelhead, that have migrated to sea or to large inland lakes are much larger than those that have not migrated. They will average 6 to 10 pounds, and while 15 to 20 pounders are scarce, they are not unusual.

The rainbow's food consists of insects in the larvae and mature stages, worms, flies, minnows and crustaceans.

Fly fishermen find rainbows will yield to the temptation of wet and dry flies in tiny 18 and 20 sizes as well as the larger 6, 8 and 10 sizes; also, streamers, salmon flies, bucktails, spoons and spinner and fly combinations. Small lures like the popper spook and wilder dilg minnow are ideal.

Plug casters take them on small lures in the ⅜ oz. and under class, like the midget river runt or midget digit; in large bodies of water where the rainbow reaches giant proportions, large wobbling plugs like lucky 13 and basser and spoons produce.

For ordinary rainbows, fly rod fishing with either live or artificial bait produces the majority of catches.

Still-fishermen with casting rods take a fair share and spinning rod enthusiasts find this fish ideal. However, for steelheal in large lakes the popular method is unquestionably trolling.

Fly fishing the ordinary streams for rainbows calls for standard fly fishing tackle such as fly rods made of tempered, split bamboo in light-trout or standard-trout actions. Leaders should

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GOD SAVE THE KING

BY ALBERT G. SHIMMEL

THE shadows of the white birch at the head of Blue Hole crept slowly across the bottom and finally touched and mingled with the root fingers of the blasted pine that guarded the pool itself. Little by little they lost their sharpness until they blended into the soft darkness of night. A few blunder-ngs stone flies heavy with eggs settled o the surface of the pool above only to e whirled over the rocks and driven leep into the eddy under the pine oots. At that moment a bit of black-ness detached itself and finned slowly nto the main line of drift just at the dge of the roots. Only the sharp night yes of an owl would have picked out he faint outline on the bottom and hen only by the white edging of the ectoral fins. The King of the pool reasted the drift and gathered his sup-er from what the stream saw fit to rovide.

The night before a ten inch trout had nissed a skimming stone fly and in urning to chase it across the lip of the alls above had been caught off balance nd churned into the depths. The King caught it easily with his hooked nder shot jaw and his paunch had welled to his complete satisfaction but onight he was lean with the angry unger that possessed him. The stone lies were becoming scarce each suc-eeding evening and tonight there were carcely enough to furnish an edge for is gnawing restlessness. With scarcely movement he drifted watchfully into he tail of the pool where the rubble ottom sometimes furnished nourish-nent in the form of armored craw fish r succulent minnows. He was cau-ious with the guardedness that comes rom experience. Did not the livid car on his right gill cover mark the assing of the herons stroke the even-ng two years before when his vigil-nce had waned in the excitement of hasing a school of dace into a blind orner of the eddy?

Patience had its reward in the sight f the armored war clubs protruding rom a mound beside a small stone. As he ancient crustacean showed little ign of coming into the open the King hrust his nose against the stone and urned it over and as the cray fish lashed backward for another hiding lace the ripples spun into the eddy s the King scooped him up almost ontemptuously.

The edge of his hunger dulled, the King kept his place close to the bottom but with his eyes fixed on the silvery translucence above. A break meant food of some sort and the King of necessity was somewhat of a tyrant in that, he exacted tribute unceasingly. Later the infinite patience that was a part of the wisdom of nature, was rewarded. A fat sphinx moth darting away from the white azalea flowers collided mid-air with a brown bat. The bat missed his prey but the force of the crash sent the moth spinning downward to tremble for a second on the surface of the Blue Hole. Stooping to recover his victim both disappeared in a swirl that once again set the water lapping along the bank. As the pool stilled again the King cruised lazily back to his hiding place beneath the pine.

Just as he neared the edge of the pine roots there fell on the shimmering window a dark blot which lay quietly for a few seconds and then began to move in a struggling swimming fashion across the King's sky light. Instantly he paused, inspected the creature for a second, then flung himself upward.

As the first hint of evening appeared a lone figure waded across the shallows some distance below the Blue Hole and made its way slowly up the sand bar to the big rock. A startled deer snorted and crashed away up through the birches without arousing more than a fleeting interest from the man. With methodical precision he assembled and strung his rod and attached a leader. Carefully he tested each knot and finally from a deep fly box extracted a curious lure of buck hair. Even the most casual inspection

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This is the final article in a series written for Pennsylvania Angler on the subject of fishing streams. Its aim is to teach fishermen the value of knowing all they possibly can about their favorite bass and trout waters.

Streams Have Character

RIFFLES AND FAST WATER

By Dick Fortney

HAVE you ever dreamed of going fishing some day—some perfect day—when your dry fly could not float more than a foot or two before a trout took it? Have you ever longed for conditions so ideal that you could cast a fly and be absolutely certain it would bring a strike?

Of course you have.

I had such an experience one day last summer. I had only a couple of hours for fishing, so I drove to a small mountain stream near home, parked the car, and started fishing on a stretch of water about a mile and a half long, using dry flies.

The brook is small, but tough to fish with a dry fly, and it contains a good population of small brook and brown trout. By small I mean less than ten inches in length. I carried no creel.

At the end of the mile and a half stretch I had hooked and released 28 trout and had missed connections with eight others.

Not one of the 36 was taken from a pool or pocket. Rather, all came from riffles ranging from six inches to a foot in depth.

The incident is worthy of mention here, for it leads to the discussion of riffles and fast water in a bass or trout stream.

An illustration is in order on the matter of fast water, too.

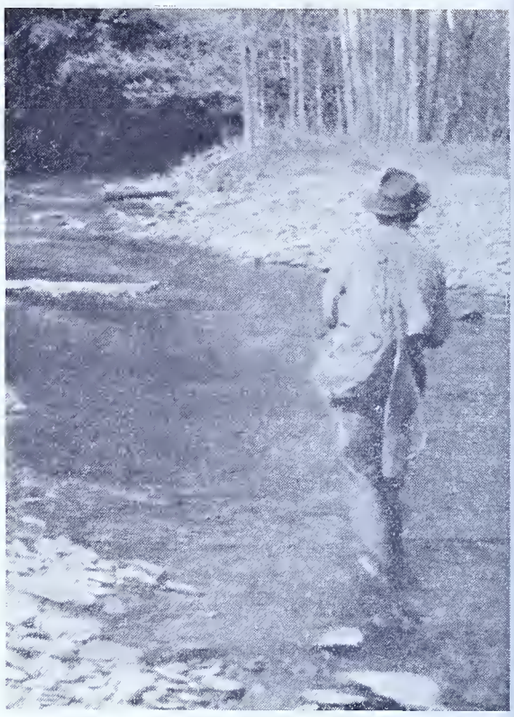
Three of us one night this past autumn fished a fairly long, curving stretch of fast water in a bass stream. We used surface plugs. The pool was so narrow that a cast had to be made carefully to avoid lodging the plug in the rocks on the far shore, and the current was swift enough that before half the retrieve was completed the plug was directly downstream from the fisherman.

We fished about three hours. In that time we caught fourteen bass and two brown trout, returning all but the five largest bass to the water.

Many other experiences like this in a quarter century of creek and river fishing have convinced this writer that there is no better place to fish—and regardless of the size or type of stream—than in the riffles and the fast water connecting stream pools.

Water that is briskly on the move attracts fish that are hungry, because natural forage is more plentiful there.

Some riffles and glides (that's the name we'll apply to stretches where the water moves briskly yet is not so shallow or broken on the surface as are riffles) serve no other purpose than feeding areas. When fish are not hungry they will be barren of finny inhabitants, largely due to the fact that they have no cover where fish may rest.



This is a small pool in a Sullivan County trout stream. Just after this picture was taken the fisherman in the foreground caught two nice trout in the swift water at the right of the bleached old tree trunk in the distance. The fish were feeding in the riffle at the head of the pool.

But other riffles and glides are both feeding and resting stations for bass and trout.

The fisherman must use his powers of observation to learn which contain fish even though there may be no visible action and to learn which are those that the fish are accustomed to using during feeding periods.

Some illustrations will make the point more easily understood.

I am well acquainted with a large creek pool that has formed at the foot of a long, roaring riffle. At its shallowest point this riffle is knee deep and so swift that the safest way for two anglers to wade across it is to travel arm in arm, each bracing the other. But in all the length of that riffle there is only one spot where it is worth while to cast a fly for trout—and that spot is a stretch about 30 feet long and some hundred feet from the head of the big pool. Further, the exact middle of the riffle (from side to side) is the hottest spot of all. Really monster trout live there.

Why, in all this magnificent water, is the good fishing confined to a space that is comparatively small?

That stream has been pitifully low as this article is written (in mid-October) and it has been possible, stand-



Flowing at right angles into the head of a long, narrow, deep pool, this riffle presented an interesting problem. But the angler shown in action used a white streamer to entice two nice trout from rock ledges along the far shore, where the water swirled and turned.



Standing in the side of the riffle, the angler in this view raised a couple of nice trout in the swift water in the middle of the stream to his left. This particular riffle is only knee deep at its deepest point.

ing on a high shore nearby, to give the riffle an inspection.

The spot where the fishing is good contains a jumble of rocks of fairly large size which obviously break the swift current, down near the bottom of the riffle, and also provide fine hiding places for fish.

The rest of the riffle, while plenty deep enough to contain good fish, has no obstructions to break the smashing force of the current, even on the bottom, and no place for fish to take refuge.

That riffle is a fine example of one that contains fish all the time, due to its formation.

In this same stream is another riffle and pool combination of another kind. The pool is small, but extremely deep, and it contains a plentiful scattering of rocks on its bottom. The riffle is wide and of only fair current and medium depth.

I've fished this area scores of times and seldom have had much luck in the pool. But the fast water immediately adjoining it downstream has provided some thrilling sport, especially in the evenings when bass and trout were on the prod. I'm sure the riffle contains no fish that make it their permanent home. The only conclusion, then, is that when feeding time comes the bass and trout emerge from their hiding places in the pool and travel into the swift water to satisfy their appetites.

In the stream we have been discussing is still a third example. This is a long, wide stretch of water, averaging from knee to hip deep, with a barely ruffled surface yet a brisk current. The best way of fishing it is to wade 25 or 30 feet from shore, then cast a fly well upstream and allow it to float until the drag of the line sinks it.

In no sense is this piece of water a riffle. Actually, it is a long pool where the water is much more shallow and many, many times more swift than in the average stream pool.

It produces some fine fish.

You've seen pictures of hooked tarpon leaping out of the water and twisting their bodies to try to throw a hook. I saw a trout do that same thing in this glide one evening. To my eye, the trout was as big as a tarpon, and it made the same powerful twists of its long body. Only nobody had it hooked. It just jumped—and gave three of us the thrill of our lives.

The riffle or glide is good fishing water for the bait and fly anglers both. A couple of incidents involving a farmer and a fish warden will illustrate the point. The farmer was a bait angler, the fish warden was devoted to large dry flies. Both were bass anglers.

The farmer liked to get into a stream at the head of a stretch of fast water, cast out a stone-catfish, and then guide it skillfully so that the current washed it under rocks in the course of the stream. The bass he caught were really fish to be proud of.

The fish warden likes to use a big hair fly, one that floats high and dry even in the roughest water. He likes to send it bouncing down a deep riffle or on a patch of swift current. And the bass he catches are no less grand than the one the farmer hooks.

The farmer does his fishing in water where fish are to be found even though they are not feeding. The fish warden prefers riffles and glides where fish go when they are hungry.

Both these men have learned their riffles—and how to fish them.

There is one other type of riffle that deserves the attention of the trout fisherman. That is the riffle that occurs every so often in the average small trout stream. It may be short and narrow and deep. It may be long and wide and shallow. It may tumble along with white-caps of foam, or merely glide silently from pool to pool.

But it is such a good place to fish that the knowing angler often will devote most of his time to it, merely

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In spite of a hot, brilliant sun, this stretch of a trout stream produced some fair fish the morning this picture was taken. The fish were lying in little pockets among the rocks, rising to take natural flies which the shallow riffle carried to them.

A Word About Rods

By Howard M. Ernst

IT is my thought that much confusion exists in the matter of selecting rods. It is my further belief that the problem may be greatly simplified through a clear recognition of the two deciding factors upon which the solution depends.

In the first instance, it should be distinctly understood a fishing rod is an instrument fashioned (a) for the purpose of properly placing a lure within the line of vision of a fish and (b) with the aid of a reel of bringing the fish to net.

In the second instance consideration must be given to the physical characteristics and general temperament of the person who is to use and play upon this instrument.

It is this latter factor that I believe is so completely disregarded. No matter how well built or finely balanced the rod, it can turn out to be a useless willow wisp or clumsy telegraph pole if placed in the hands of an angler whose wrists, arms and temperament it does not match. It is useless to place a 7½-foot, 2½-ounce rod in the hands of a six-foot giant or present a 14-ounce, 12-foot salmon rod to a five-foot, one hundred-pound lady. Both weapons may in themselves be perfect but in the hands of such anglers are apt to prove completely valueless.

Discussing the problem in further detail, the desired physical characteristic of a rod must be studied in relation to the water to be fished. Unfortunately, it is not possible to select a compromise weapon that can be used effectively on all waters and for all methods of fishing. It is possible however to choose a fly rod that will perform satisfactorily for dry as well as wet fly fishing. In order for the rod to do this double duty it must, regardless of weight, be slightly stiffer than medium stiff in its action. For this reason I believe rods of soft and whippy action are to be avoided. Furthermore when fighting a wind, and who has not had to frequently face this all too prevalent condition, the rod of stiff action may mean the difference between being able to fish or just sit helplessly on the bank. Another advantage of the stiff rod which is of particular interest to those of slight wrist and small build is that less weight is required to perform a given task as compared to rods of weak action. Naturally it is assumed that extremes will be avoided and the tip section will retain sufficient suppleness to do its job of speeding the line on its way and neatly retrieving it. It is the ability of the stiff action to do this with authority combined with gentleness, yet with minimum weight in itself that makes it a must for dry flying.

The length of a rod, combined with the character of its action, determines the length of line it can conveniently handle. The longer the rod the longer line it will cast. The stiffer the rod, the greater the accuracy and the ease with which the line may be cast. An eight-foot medium stiff rod may prove a more efficient weapon than an 8½-foot supple rod but beyond 8½-foot length, consideration must be given to the use to which the rod is to be put. It must be remembered that the rod not only must be capable of casting a line but also of landing a fish.

While stiffness of action is desirable as an aid to properly presenting a lure, it contains several real elements of danger when it comes to playing a hooked fish. The stiffer the action, the greater the risk of breaking the leader or even the tip on the strike. The more authority the rod has, the greater the difficulty in maintaining that steady even pressure that eventually brings the trout or salmon to creel. The more give to the rod, the greater the protection from some sudden unexpected rush or violent lurch of the fish. The action of a rod is very much like that of a coiled spring. The pressure is gradually increased as the coils are extended or as the rod bends but if the spring is too stiff for the task chosen, the maximum strain immediately applied and something must break. For these reasons it is often advisable to compromise "action" for "safety". That is, sacrifice sufficient stiffness to insure pliability that will protect equipment and minimize the chance of the hook pulling out or that dangerous momentary slack.

Reviewing the factors upon which depends a rod's capability of casting and catching and applying them to actual operations, we find that for small waters 7½ and 8 feet rods of stiff action will prove the most satisfactory but as both water and fish grow larger, 8 to 8½ feet medium stiff to stiff in character are required and where steelhead and salmon are involved, 8½ to 9½ feet lengths medium stiff to medium action will prove most effective.

Up to the present I have deliberately omitted the question of weight, for it is at that point that the physical build of the angler becomes involved. However, there is still one mechanical feature to be kept in mind; the stiffer the rod, the less the weight required for a given strength, the more supple the rod, the more weight required. As a corollary, one might also say the longer the rod, the greater the power but the proportion would not be as great as in that applicable to action. In each instance, action plus length governs, the weight follows.

As an example, an 8½-foot stiff rod will do as well as a 9-foot soft rod and probably a shade better regardless of the weight of either. An 8-foot stiff rod will equal or surpass an 8½-foot supple rod in performance. The supple rod may lack sufficient power to set the hook, the stiff rod may be too rigid to prevent the hook from tearing out or its tip from being broken. By strengthening the action of one and softening that of the other, both faults are eliminated and the longer heavier rod will out perform the others.

Now the point that I would like to bring out is the fact that the angler should not approach his tackle dealer with the preconceived notion that an 8-ft. 4-oz. rod or 9-ft. 6-oz. rod or any other specific size and weight is what he needs. The rod that he can best handle is what he should have. If he is a powerful fellow a 9-ft. 6-oz. rod or medium action might well prove perfect for everything but small brook



Photo by Lewis of Knox, Pa.

Mrs. Reeves C. Duff of Knox happily displays the exceptionally nice brown trout she caught May 22, 1948 from Beaver Creek in Clarion County. The big fish was 22 inches in length and weighed 4¼ pounds. The feat of landing this fish was accomplished on a 3½ ounce 7½ foot fly rod, and won for Mrs. Duff another nice fly rod in a big trout contest sponsored by The Knox Bucktails Sportsmens Club.

trout water whereas such a rod in the hands of a delicate wrist might not only fail to function but by the end of the day become an instrument of blisters and torture. This chap will do as well with an 8½-ft. 5¼-oz. rod on the stiff side or better yet save additional weight with a two-piece 8½-footer of 4¾-oz. and with action just short of stiff or medium stiff. Such a weapon will equal the performance of the heavier rod on everything but salmon over ten pounds.

When the little fellow wishes to fish salmon, he can help himself with an action just short of stiff and with a lighter line, save himself some work in casting. By adding an auxiliary he can manage to get through a day's fishing without completely tiring himself. If he does not wish to do this he can shorten his rod three inches, decrease the weight ⅜ ounce and soften the action to short of medium stiff. This latter change will protect him against a broken tip or pullout and at the same time kill a salmon as readily as the heavier rod. The decrease in weight will help him to handle his rod efficiently and comfortably, which is the main thing to be desired.

The same little chap can have a lot of fun with a 7½-ft. 3¼-oz. medium stiff rod for small waters or 8-ft. 4-oz. rod for most trout streams. The big fellow can take an 8-ft. 4½-oz. medium to soft action and it will satisfactorily handle most any stream situation for him.

The possible effective weight, length and action combinations are innumerable. In general I would say take advantage of your own strength by added length and softened action, protect your weakness by stiffening action and lessening length. Above all, choose a weapon which you can deftly wave all day and still be ready to easily make that last delicate cast over the big one which has just dimpled the surface as he begins his evening meal.

Fish Head Trophies

A trophy to prove the size of that whopper you catch can be mounted by anyone. Cut the fish's head off just behind the gills. Clean all flesh from the inside and cut out the eyes. Prop open the mouth with two or three sticks. Make a brine of salt and water strong enough to float an egg. Keep the head in the brine for two weeks. Remove, rinse in clear water and place in the sun to dry. When the head is thoroughly dry tack it to a varnished shield or board. Small brass-headed tacks look well for this purpose. Place glass eyes in the eyesockets. These may be obtained from any firm selling taxidermist's supplies. When the varnish has dried remove the sticks from the trophy's mouth and it is ready to hang in your den. Fish heads treated in this way can be kept clean with a damp cloth and will last for years.—*Texas Fish & Game.*

Fish Commission Staff Held Christmas Party



On Wednesday, December 22, 1948, the Harrisburg office staff of the Pennsylvania Fish Commission held its annual FISH-MAS Party in the Rose Room of the Wm. Penn Hotel, Harrisburg. The affair was a happy one and provided the extra touch of office relationship which serves to contribute much to the cooperation and service of this department. Reading left to right and seated around the table are: Anne Bland; Rae Ney; Rita M. Kreidle; Mrs. Myrtle James and George James the Senior Fish Warden of Cumberland County; Charles V. Long, Fish Warden of Perry-Juniata Counties; Dorothy Schaar; Ruth Hamaker; Mary Latchford; Yvonne Reese; R. P. Deiter, Comptroller; Mrs. Anne Deiter; B. F. Barnhart, Fish Warden of Dauphin-Lebanon Counties, and Helen Moorhead. Standing at the end and reading from left to right: J. Allen Barrett, Director of Public Relations; H. R. Stackhouse, Administrative Secretary; C. A. French, Commissioner of Fisheries; General A. H. Stackpole, member of the Board of Fish Commissioners; R. C. McCaslin, Deputy Comptroller, and Dr. Glenn V. Brown, Scientific Consultant.

Striped Bass Study Under Way

An intensive study to uncover new facts on the seasonal movements and life history of the striped bass, one of the East's most popular salt-water game species, now is under way from Maine to South Carolina, according to the Wildlife Management Institute. The program is being coordinated by *The Salt Water Sportsman,* 136 Federal Street, Boston.

Cooperating in the project are individual sportsmen, the U. S. Fish and Wildlife Service, the Atlantic States Marine Fisheries Commission, the Woods Hole Oceanographic Institute, and many state marine fisheries agencies. Funds were furnished by contributions from anglers, sportsmen's clubs, and *The Salt Water Sportsman,* a newspaper devoted to ocean fishing.

Sportsmen who wish to cooperate may tag fish themselves, and free supplies of tags may be obtained, with instructions for their use, from the newspaper. The project should give the fisherman a new excuse to indulge in his favorite sport a little more than usual. If the wife objects, he always can say that he is contributing his time to science.

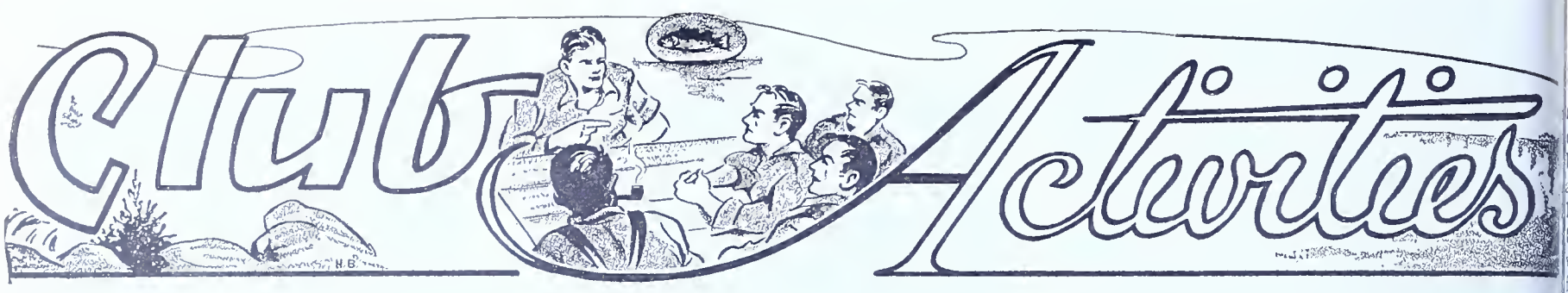
Straws in the Wind

The American Magazine has just concluded a most interesting survey among its own readers on a nationwide level to determine just what is man's favorite outdoor sport. Yes, as you suspect the sport of fishing was far and away in the lead with a total percentage of 39. Actually it showed more than a 50 per cent average, as only 71 out of each 100 males admitted to engaging in some outdoor sport. So it was 39 out of every 71 who named fishing as their favorite outdoor sport.

Another interesting fact was that 35 per cent of all those naming fishing as their favorite sport were under 36 years of age, while 42 per cent were over 36 years of age.

Straightening Rods

If either the tip or middle sections of your bamboo fishing rod is warped and crooked it can be easily straightened. Assemble the rod and hang it to a nail driven in the wall by means of a short piece of cord or line passed through the tip guide. Attach a light weight to the butt of the rod. The steady pull of the weight will soon take out the kinks.



Federation Meeting Dates

The annual meeting of the Pennsylvania Federation of Sportsmen's Clubs, according to Secretary Treasurer Dr. Clyde A. Mortimer, has been officially slated for Saturday, February 12. Meeting place for the general session is the Educational Forum, and the starting time at 9 a. m.

Directors of the Federation are scheduled to meet on Friday, February 11, at 10 a. m., in the Harrisburger hotel. Following the regular business portion the directors are going into the panel sessions. All resolutions to be considered the next day will be reviewed.

Complete copies of all resolutions will be mailed to each club for consideration before the February session.

Harrisburg will be a very busy place during the time of the annual convention. Several other gatherings are going on at the same time, one in which approximately 2,000 persons are going to take part.

Consolidated Sportsmen of Lycoming County

Secretary Peterman of the Consolidated Sportsmen of Lycoming County makes the following report for his organization:

Senior membership campaign for 1949, is now under way. Quota is 10,000. Junior membership campaign will start February 4, 1949, with a dinner meeting for leaders. Quota is 2,000.

An ice skating project at the Memorial Grounds is now almost completed. The rink covers several acres and is another recreational feature of the grounds.

York Chapter-67 IWLA

At a recent meeting Ralph Rineholt was elected president, Edward G. Fraley, vice-president; Ken Shultz, treasurer; Bob Reinecker and Harold Coffman were retained as secretaries for 1949. The balloting saw these eleven directors come out on top: George Forrest, chairman of the board, Carroll Hildebrand, Ezra Myers, Frank McConnell, Robert Mader, Harry Allman, Faris Barnhart, George Goodling, William Kauffman, Alvin Kuntz and Harry Haines. All officers were installed at the January meeting when new committee heads were also announced.

Clinton County Sportsmen's Federation

The trout lovers got a chance to prove their affection in December. Several truck loads of trout were received for stocking in nearby streams. About 6500 trout were planted in Youngwoman's Creek and its branches in one day. Quite a few of the local high school boys turned out in overstuffed clothing and boots to help prepare for next spring's sport.

Unami Fish and Game Association

Twenty-two new members were recently added to the roster of the association, according to *The Turtle,* the club's official monthly publication.

Cash profits for the recent field day amounted to $518.40. Activities are being planned for a cooperative range program next spring between the rifle and pistol committees.



Disabled veterans from the Veterans Hospital at Aspinwall, Pa., enjoying a fine turkey dinner given by the Women's Auxiliary of the Blawnox Sportsmens Club of Blawnox, Pa. The ladies club was headed by Mrs. J. Haus who was in charge of the affair. Mrs. Walter Wateska is president of this progressive organization.

County Sportsmen Plan to Buy Henrietta Dam for Fishing Park

The Blair county unit of the Pennsylvania Federation of Sportsmen's Clubs held a directors' meeting in Altoona and a membership meeting at the courthouse in Hollidaysburg recently, in charge of President John H. Gahagan.

For the past several months the officers of the federation have been endeavoring to have the Henrietta dam dredged and closed and converted into a recreation area and "fishermen's paradise." They have had the cooperation of local state officials and the fish commissioner and director of the bureau of waterways.

At the recent meeting the president was authorized to proceed and take an option on the dam site at Henrietta and proceed to purchase it and turn the deed over to the state, before actual work could proceed. The option has been taken and state officials from Harrisburg will shortly be presented with the necessary papers required before going ahead with the project.

The dam site and 100 feet around the shoreline will be purchased and turned over to the state. It will provide a fine recreation area and fishing dam for sportsmen in this section of the state. When completed the dam will be stocked by the state fish commission.

The federation decided to have only three committees this year, the game, fish and conservation committees. The committees will be composed of one person from each member club. The clubs will designate their representative on each committee and notify the secretary of the federation as soon as possible.

The Blue Hole project is progressing, and work will be started the coming spring to pipe a limited quantity of water into the hole and make an outlet, to assure circulation and to permit stocking and propagation of fish at this point. The fish will be released from time to time in Blair county streams.

It was decided to have each club in the federation promote some project this year and at the end of the year make a report of same to the federation.

Wissahickon Field & Stream Assn.
Sandy Run Rod & Gun Club

Through cooperation of the State Sanitary Water Board, the Pennsylvania Fish Commission, Fish Warden Harry Cole, the County Federation and the two clubs, the case of Abington Township's killing of fish by accidental discharge of pollution from its sewage disposal plant into Sandy Run has been settled and reimbursement made by the township for the fish killed.

Hydro Fishing Club Contest Winners Announced

The Hydro Fishing Club has just announced the prize winners in the fishing contest, and first prizes of $30.00 each have been awarded to Norman H. Schlemm for a walleye weighing 8 pounds; to E. C. Kneisley, Sr., for a bass weighing 1.9 pounds; to Clyde J. Hamaker, Jr., for a catfish weighing 2.7 pounds; and to A. B. Burkhart for a carp weighing 10.2 pounds.

Second prizes of $15.00 each were awarded to E. Earl Sheets for a walleye weighing 7.7 pounds; to Donald V. Binkley for a bass weighing 1.6 pounds (15 inches long); to Charles McMahon for a catfish weighing 2.6 pounds (20½ inches long); and to Mildred E. Helm for a carp weighing 10 pounds.

Third prizes of $5.00 each were awarded to Leonard W. Pomraning for a walleye weighing 7.2 pounds; to Fred Bentley for a bass weighing 1.6 pounds (13¼ inches long); to Hugh M. Lowy for a catfish weighing 2.6 pounds (19½ inches long); and to James Marinkov for a carp weighing 7.2 pounds.

The Pennsylvania Water & Power Co. and the Safe Harbor Water Power Corp. have mailed checks to the lucky fishermen.

Although the fishing contest closed on November 30, announcement of the prize winners was delayed until all entries in the contest were carefully checked by representatives of the Federated Sportsmen's Clubs. Two ties by weight were entered for second and third prize in the bass and catfish contests. These were decided in accordance with the contest rules which specifies that the greatest length of the tied entries determines the winner.

The Hydro Fishing Club was formed as a result of a suggestion made to the Federated Sportsmen's Clubs by Pennsylvania Water and Power Company and Safe Harbor Water Power Corporation, the purpose being to bring together the many fishermen who enjoy fishing at the hydroelectric plants at Holtwood and Safe Harbor or along the shores of Lake Aldred and Lake Clarke; to date the Club has 666 members. Because organization of the Club was not started until October, the fishing contest did not get under way until late in the 1948 fishing season and for that reason many of the fish which won prizes were not the largest caught during the season at the hydro plants. It has been announced that another contest, open to members of the Hydro Fishing Club, will be scheduled for 1949

Holtwood and Safe Harbor appear to be two of the most popular fishing spots along the river as more than 22,000 fishermen were registered at the two plants during the 1948 season. The companies have provided lights for those who prefer to fish in the evening hours and it is expected that by next year many other facilities will be installed for the comfort and convenience of the fishermen.

Anyone wishing to join the Hydro Fishing Club may do so by filling out and sending an application blank to Mr. Robert Fasnacht, secretary of the Federated Sportsmen of Lancaster County, at 236 W. Franklin street, Ephrata, Pa., or to Mr. Sherwood D. Suereth, secretary of the York County Federation of Sportsmen's Clubs, at 118 W. 6th Ave., York, Pennsylvania. Application blanks may be obtained from the above and at Holtwood or Safe Harbor.



Norman Schlemm and Sgt. Landis Rankin of the Safe Harbor Guard display Mr. Schlemm's 8 pound, 27½ inch walleye which won top prize in the Hydro Fishing Club contest.

Big Elm Rod and Gun Club

The 27th annual banquet of the Big Elm Rod and Gun Club of Millerton was held Dec. 15 in the Millerton High School Auditorium. Toastmaster for the banquet was Stanley Hamilton. A full evening of interesting entertainment was arranged.

The Big Elm Rod and Gun Club is affiliated with the Tioga County Consolidated Sportsmen's Association and the Pennsylvania Federation of Sportsmens Clubs. The club was first chartered on Nov. 7, 1921 and since that time has continually worked in the interest of sportsmen in the Millerton area and for Tioga county.

Tri-Valley Outdoor Club

A shipment of 1100 brook trout was stocked in the Leslie Run section by representatives of the State Fish Commission and the Tri-Valley Outdoor Club. This is part of the program of stocking that is taking place in this section.

Also to be stocked in the Tri-Valley area is Pine Run in the Hickory Run section.

Fish were also placed in Drake's Creek and the Stoney Creek area was stocked. Annually the Tri-Valley Club is responsible for placing young fish in many streams in this section as part of the fishing season preparations by the state and its cooperating sportsmen's organizations.

Blair County Unit—State Federation

At a recent meeting of the Clubs the following officers were elected to serve for the 1949 year.

President—John H. Gahagan, Martinsburg, Pa. Vice President—M. W. Hunter, 523 Garber St., Hollidaysburg, Pa. Secretary—Beam Slonaker, East Freedom, Pa. Treasurer—Ray Burger, 510 Montgomery St., Hollidaysburg, Pa. Delegate to South Central Division—President John H. Gahagan.

National Wildlife Restoration Week Announced for March 20-26

National Wildlife Restoration Week this year will be held during the week beginning March 20th marking the first days of spring. It is the twelfth such event sponsored by the National Wildlife Federation whose headquarters are in Washington, D. C.

National Wildlife Week is a part of the educational program of the Federation and seeks to bring home to the Nation's citizenship the need for soil, water, and plant conservation.

Over 20 million fishermen and hunters, as well as every motorist, vacationist, and citizen who enjoys the outdoors and the splendid beauty of nature, have a vital interest in preserving food-bearing topsoil, clean, pure and unpolluted waters, lush green forests, and abundant wildlife. The loss of any of these has a direct effect on the value of the others.

High public officials have repeatedly urged the conservation of the country's natural resources which are the wealth and backbone of its economy.

National Wildlife Week was inaugurated to bring out these facts as a challenge to the nation to preserve its natural wealth which is so vital to its future security.

To carry on this work, the National Wildlife Federation issues each year a sheet of Wildlife Conservation Stamps. This year the art work has been painted by Walter Weber, one of America's great wildlife artists. Mammals, birds, trees and wild flowers make up the 36 Wildlife Conservation Stamps in beautiful natural colors. In previous issues, the Federation has reproduced 412 different species of American wildlife, thus bringing the total to 448—a veritable pictorial encyclopedia of outdoor resources.

The sheet sells for $1.00 and may be obtained from the National Wildlife Federation, 3308 Fourteenth Street, N. W., Washington 10, D. C.

The Federation has affiliates in 37 states and during Wildlife Week the state and local groups hold conservation meetings where the dramatic story of soil, water and plant life in its relationship to wildlife resources is told from the platform, through the press and over the radio.

Details and information relating to Wildlife Week activities may be obtained as well as posters and display materials for schools and libraries.

Federation Announces Plans for '49 Junior Conservation School

The State Federation of Sportsmen's Clubs advises that, during the summer of 1949, 21 boys from each division of the State will be entitled to enroll in a one-week course of the Junior Conservation School for Boys at the Pennsylvania State College in Centre county. In the southeastern division of eight counties, this means two boys from each county and five at large throughout the division. Only sophomores and juniors in high school are eligible to enjoy this course—so that they can go back to their respective schools in September of 1949 and help other boys in conservation practices. The course is of one week's duration and costs $30.00 per boy.

The Universal Trout Fly

By Talbott Denmead

IT was last spring. Some time, some where I had annexed a remarkable trout (?) fly, made of squirrel tail, primarily, brown and white, some tinsel and a lot of soft stuff; name unknown. It was tied to a big hook, probably a No. 4. Quite a chunk for a delicate fontinalis to fancy.

The stream had been stocked with 8 and 9-inch trout, mostly brooks. We went up for two days and the first day was ideal. I used dry flies because I prefer to take my trout in that manner, and was fairly successful. My companions fished in the orthodox wet fly manner, and were equally successful. We each caught 6 or 8. But the next day was not so good. It was a Sunday and we had plenty company and the fish were pretty well down by 9 o'clock in the morning, when the wind started to blow a gale from the northwest. The leaves blew off the ground and scattered along the water, and countless quantities of trash landed on the surface. And self-respecting trout would naturally go down deep, and that is what they all did.

First I tried the dry, and the wind blew them everywhere and wet flies were little better. In desperation I put on a heavy leader—6-lb. test—about 5 feet long, and at its end I attached the "monstrosity". "Now," I said to myself, "maybe I at least can get my fly in or on the water." Believe it or not, I got 4 or 5 nice brookies in a short time in a short stretch of the stream in spite of the adverse conditions.

Strange as it may seem I could cast this fly diagonally across and toward the head of a pool and it would float. When it had passed the middle of the pool and approached the lower end, I would give the rod a jerk and the fly would sink. And every trout I caught struck about the middle of the pool on the retrieve. I saw one break below the fly as it floated down, and strike at it again after it had sunk, then follow it for 6 or 8 feet. Then hit it a smash—with no fooling. Apparently that is what they all did. I got several, and put back unharmed all but two about 9 or 10 inches that were beautifully colored, for my companion's supper.

Two weeks later I fished two miles of a stream near town that was restricted to fly fishing only and a daily limit of 5 fish. As I said before I like to make them come up to a dry fly; so I fished up the entire two miles with the lightest of leaders and the driest of flies of several patterns of known efficiency. Not a fish did I get nor a strike. I saw several but they would not budge to a perfect riding fan wing Royal Coachman. So I started to fish down; I tried two or three streamers such as Mickey Finn, Black Gost, and got one small trout. Then I decided to put on my squirrel tail that had "netted" me 6 or 8 the previous week. Yep, I got three nice trout on the thing in the next half mile, fishing it wet.

The next week I went back to where I had first used this fly, and started right in to fish with it. My second fish was a 13½-inch rainbow, then a twelve-inch brookie, both of which I kept. Then on the same fly I took four more around 8 or 9 inches, then quit.

The next morning the stream had two anglers for every trout, so we drove several miles to another stream, and found it almost as populated, with anglers of all ages, sizes, and using everything the tackle dealer had guaranteed would take trout. I put on my old faithful, still attached to the heavy leader, walked up to a pool that had just been vacated by two bait fishermen—this stream not being restricted to fly fishing—and proceeded to take an 8-inch brook while the fly was still afloat. And I repeated the performance at the next pool.

Eureka. I had at last what every angler has dreamed of, coveted, and from time to time thought he possessed—the Universal Trout Fly. Alas and alac. Pride indeed goes before a fall. Do not count your chickens before they are hatched, etc. Luck turns sooner or later, and it turned this time from good to bad. At the next pool I jumped on a rock, slipped, both feet went skywards, and a few hours later in a hospital, X-rays showed a broken hip.

And now comes the sad part, which every angler will appreciate and sympathize with me. While lying on the ground awaiting suitable transportation I dismantled my tackle, wound up the leader with the Universal Trout Fly still attached, and carefully stuck it, leader and all, in my pants pocket. You all know the pretty little night shirt you wear in hospitals, split down the back and no pockets; my clothing, boots, rod, fly boxes, etc., were all bundled up and taken home by my brother anglers. And when I got home two months later not a single thing in my whole outfit was missing—except the heavy leader and my squirrel tail fly. It was gone, but never to be forgotten.

I do not know where I obtained this fly, I cannot accurately describe it if my life depended upon it. I looked through everything I had to see if I could locate something like it. I did find a squirrel tail streamer which was

(*Turn to page* 16)



Intent concentration. Miss Patricia Knoll, daughter of Mr. and Mrs. Leo G. Knoll of Dickson City, caught last summer while deeply engrossed in one of her favorite pastimes.

The Fabulous Quilby Minnow

By

Joseph D. Bates, Jr.

Nationally known angling authority and author of one of America's best selling fishing books, "Spinning for American Game Fish"

AS the old saying goes, "Some lures are made to catch fishermen and others to catch fish." Of all the thousands of varities which decorate dealers' shelves, few of them are really famous for their proven ability to put the piscatorial quarry where we can put butter, salt and pepper on him. We can all name a few, but if you don't have any fingers left over in counting them, you are easy to please.

Good lures result from a combination of inspiration and hard work by craftsmen who really know their fishing. But the pay-off on the deal is how many species of fish they catch and how often they catch them. It takes a long time to find out for sure.

My tackle boxes are so full of combinations of hooks, wood, fur and feathers that I am apathetic to the rantings of anglers and manufacturers who think some new found gadget is the answer to filling the creel. But when a sure thing comes along, it doesn't seem quite right to keep quiet about it. The sure thing, for my money, is the Quilby minnow.

Someone sent me a few Quilbys a few years back, and they lay in my tackle box until the spring after the Japs said "Uncle" at Tokyo Bay. These were weighted Quilbys, for spinning. When I learned how good they were, I went out and bought a complete set, which includes Quilbys of all sizes from tiny fly rod models to heavy weighted ones you can use with a plug casting outfit.

I took them to Maine spring before last, and the big square-tail trout there went for them like a kid takes to candy. So did the togue and the Landlocked salmon. Now partly convinced, I tried them in the summer on pickerel and Small mouth bass. The way pond fish hit a Quilby is nothing short of amazing. I tried them in salt water for mackerel, weakfish and stripers. The striped bass either were not in evidence or they weren't very hungry, but the weaks and the mackerel struck at them as if they hadn't had a square meal in days. An hour or two with the Quilby gave us so many mackerel that we quit fishing.

My friend Ted Trueblood was in Florida, using a fly rod on baby tarpon, so I sent him some Quilbys. A week or two later, Ted wrote back, screaming for more. "Haven't had so much fun in years," he said, "but you have to figure on losing a few lures when you fish for tarpon." Evidently, when fishing became a bit slow, he would put on a Quilby and get results.

In Canada last fall, the same thing happened. The lakes were low and the trout off their feed. They cared little for flies, but the seductive wiggle of the little Quilby brought them to the surface with the kind of smashing strikes that make more than ten million anglers take out fishing licenses every year. So I gave away all my Quilbys to friends who wanted to catch fish, and I've just now replaced my stock for next season.

Being of an inquisitive mind, I looked up the maker to see how he put the little lure together. I tried it under every possible condition, trying to find out why the Quilby is so universally successful in catching fish. There are two secrets in it, I think. You fish it like a streamer fly, but it has qualities which no streamer fly possesses that I know of. Its quill body is shiny, a bit iridescent, and juicy looking. It's the nearest to a fresh live minnow I ever saw. The head of the lure is so constructed that it almost fishes itself, with a darting, wavering motion so true to the action of a forage fish that you would think the darn thing was alive. Since the hook is turned up, it is virtually weedless.

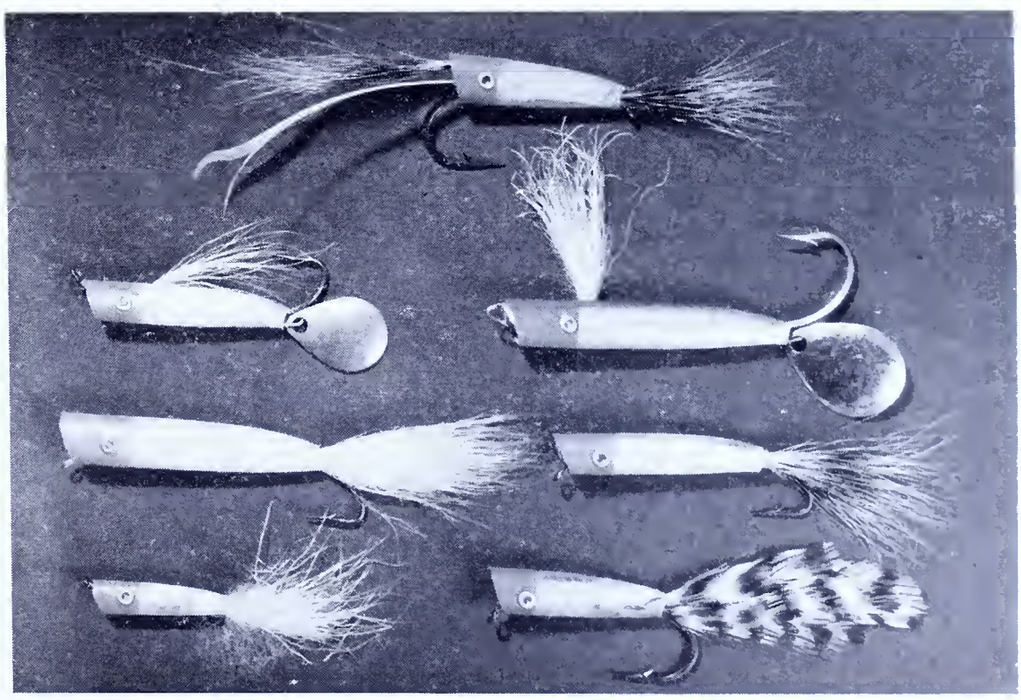


Big brown trout are suckers for the Quilby minnow.

The second secret of its success is that it is obtainable in all sizes, several colors, and in weighted or unweighted varieties. Thus it can be used as a fly rod lure or with spinning or plug casting tackle. In fishing small streams, where tiny food fish exist, the little Quilbys do the trick. If fish are on the surface, or if they are deep down, there's a weighted or unweighted model suitable to your tackle and fishable at the depth where the fish are feeding.

The construction of the Quilbys is interesting. It is made from actual turkey quills cast off in the fletching of arrows used in archery. These quill ends are hard as horn and can be bounced off rocks without damage. The hook is tied with a hair or feather tail and is inserted into the quill after

(*Turn to page* 21)



Quilby minnows accurately resemble small forage fish (top) Quilby Crawfish for fly rod use; (Next pair, down) Quilby Wob-Tail for spinning and plug-casting; (Next pair, down) Quilby for spinning. This and the Wob-Tail are weighted; (Bottom) Unweighted Quilby for fly rod use. Quilbys are made in many sizes and color combinations.

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What's New

Reviewed by Hugh Johnson

in Fishing Books

The Pennsylvania Trout Angler's Basic Bookshelf

This is a long slender limb at the very top of the old opinion tree, but I am nevertheless crawling right out to the tip edge, in deference to the many people who have asked me this question: *What* are the fishing books which you consider to be of first-purchase priority for the Pennsylvania trout fisherman, basic books of lasting value to provide the core of a trout fisherman's own angling library? Although any such selection springs in large measure from personal prejudice both literary and piscatorial, in making up the following list I have dug into the craniums of other fishermen whose book-reading and book-collecting selectivity are greater than mine. Included are only those books which are in print, which can be purchased in bookstores or by writing directly to the publisher, and which are considered to be specifically valuable to Pennsylvania trout fishermen. So, crawling out on that creaking, swaying limb, I offer the Pennsylvania Trout Angler's Basic Bookshelf:

The Dry Fly and Fast Water by George M. L. LaBranche. Chas. Scribner's Sons, 597 Fifth Ave., New York 17, N. Y. ($2.50). The American classic on the dry fly.

Trout by Ray Bergman. Alfred A. Knopf, Inc., 501 Madison Ave., New York 22, N. Y. ($5.00). A fine book, especially noted for its many pages of color plates of flies, with listing of materials of which the flies are made.

Streamside Guide To Naturals and Their Imitations by Art Flick. G. P. Putnam's Sons, 2 W. 45th St., New York 19, N. Y. ($3.00). Ray Camp, *N. Y. Times* Outdoors Editor, calls this book "of more real value to the fly fisherman than any book I have ever read."

The Complete Fly Fisherman: The Notes and Letters of Theodore Gordon, edited and with an Introduction by John McDonald. Chas. Scribner's Sons. ($7.50). 584 rich pages of the angling articles and letters of Theodore Gordon, father of American fly fishing, originator of the Quill Gordon, the American counterpart of the English Halford.

Fly-Tying by William Bayard Sturgis. Chas. Scribner's Sons. ($2.50). This has everything for the fly tier, a complete "textbook."

The Book of Trout Lore by John Crowe. A. S. Barnes and Co. ($3.75). The "purist" might snarl at this one, but it's a real how-to-catch-fish book, whether done with flies, grubs, larvae, garden hackle, or grasshoppers.

Lee Wulff's Handbook of Freshwater Fishing by Lee Wulff. J. B. Lippincott Company, E. Washington Sq., Philadelphia 5, Pa. ($2.00). A simple, practical book with a wealth of information packed into its convenient handbook size.

A Book of Trout Flies by Preston Jennings. Crown Publishers, 419 Fourth Ave., New York, N. Y. ($7.50). The most readable book available about trout fishing entomology as it applies to Pennsylvania-type streams. Magnificent color plates of natural flies and their imitations.

A Trout and Salmon Fisherman for Seventy Five Years by E. R. Hewitt. Chas. Scribner's Sons. ($4.50). Reviewed in January PENNSYLVANIA ANGLER.

The Compleat Angler by Izaak Walton. Available in many editions. An angling library without this?

If you want to know more about any of these books, write to the publishers concerned. They will be glad to send information.

Coed: "I'll stand on my head or bust."
Athletic Instructor: "Just stand on your head. We don't expect too much."

The days are gone when you could peer through any one of a hundred knotholes and see a ball game free—they're using that kind of lumber to put into $27,000 homes.

Famous last words: The burlesque show I saw in that town was so rough even the programs were printed on sandpaper.

THE UNIVERSAL TROUT FLY

(*From page* 14)

the nearest thing to it, and I took it to an expert fly tier, described the lost one as best I could; told him my sad story, shed tears on his shoulder, and begged him to help me. He promised they are almost finished; the season will open. But will they work? Or is my fly—"THE" fly—lost to mankind forever? We shall see.

The Joy of Being An Editor

Getting out this magazine is no picnic.
If we print jokes, people say we are silly
If we don't they say we are too serious.
If we stick close to the office all day,
We ought to be around hunting material.
If we go out and try to hustle,
We ought to be on the job in the office.
If we don't print contributions,
We don't appreciate genius;
And if we do print them, the paper is filled with junk!
If we edit the other fellow's write-up we're too critical;
If we don't, we're asleep.
If we clip things from other papers,
We are too lazy to write them ourselves.
If we don't we are stuck on our own stuff
Now, like as not, some guy will say
We swiped this from some magazine.*
*We did!

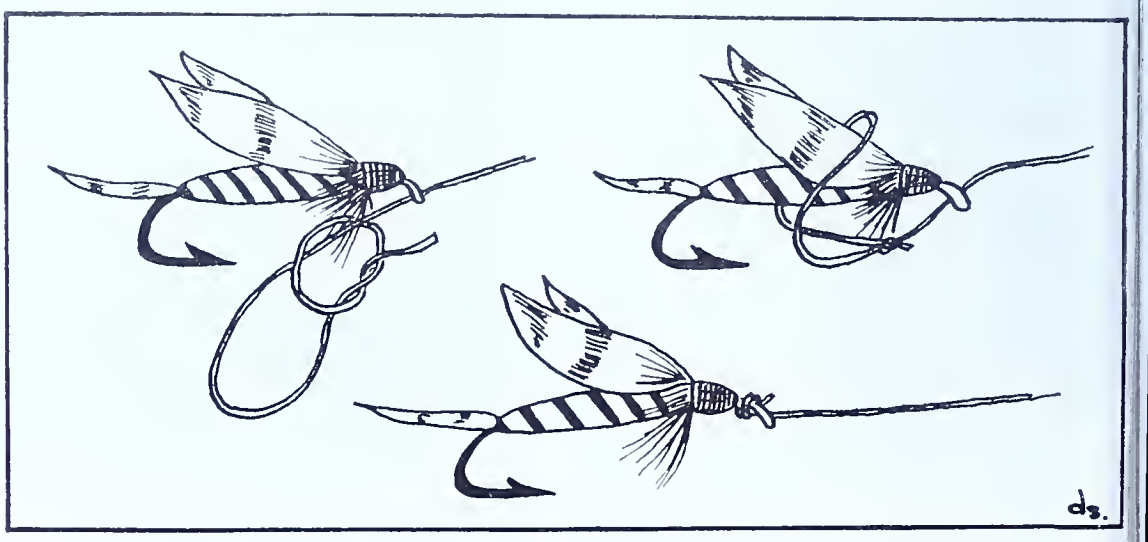
The Turtle Knot

By Don Shiner

Various types of knots have been devised to attach flies and hooks to lines and leaders. Some of the knots are quite difficult to tie with cold hands and others do not have the best holding qualities when compared to others.

However, one of the best known and easiest knots to tie is the 'turtle' knot. This knot is begun by running the end of the leader through the eye of the hook towards the point. Make a single 'running' or 'slip' knot at the end (see illustration). The loop is then opened large enough to allow the fly to pass through and placed around the ey of the fly. The loop or running knot is the pulled tightly around the eye of the fl This knot will stand considerable strai and is excellent for Spanish or Japanes silk gut as well as nylon.

This is perhaps the simpliest knot to ti has unsurpassed holding qualities, yet quite simple for the angler to untie whe desiring to change flies or lures. While can be used with success on straight eye hooks, this knot is best tied on turned u or down eyed hooks. For this reason, th is one of the best knots to be used by dr wet and streamer fly anglers.



STREAM-SIDE LIFE

THE MUDPUPPY

By ROBERT LEO SMITH

The most misunderstood and perhaps the gliest creature of the stream is the mud-ppy, also commonly known as the water-g or dog fish. Each year thousands of ese salamanders are killed by anglers, any of whom regard them as highly oisonous and will not even touch them, referring to cut away the hook, crush their eads and throw them away to die.

The mudpuppy's grotesque appearance ay be the cause of this fear. The body stout, the head is broad and flat behind e eyes, and the prominent gills are red nd bushy. The color is variable but the ajority of mudpuppies are rust-brown with ounded spots of blue-black scattered over e backs and sides.

The mudpuppy lives in waters of many iverse conditions, which accounts for its ide distribution. It inhabits shallow weed-hoked bays and deep, slow, mudbottomed treams, polluted creeks and rivers; but in ennsylvania its favorite habitat is clear, ure streams that are broad and shallow, ith beds of rock and gravel, deep pools nd riffles. It is especially abundant in the ributaries of the Allegheny.

Thoroughly aquatic, the mudpuppy is octurnal in clear streams and lakes, but oves about during the day in the muddy es. It is active during all the seasons of e year and has been observed swimming eneath the ice during winter. It is very ecretive and if disturbed on the stream ottom, it will immediately seek shelter, often ushing its way beneath a stone that will nly cover its head. The mudpuppy swims ith lateral undulations and when walking n the stream bottom, it moves the two iagonally opposite legs at the same time. t breathes chiefly by its gills, especially in arm or poorly aerated water where they re constantly kept in motion. In swift, cold ater it keeps the gills close to the body. Some respiration takes place through the skin and lungs but the latter are used only as a last resort for air. If removed from the water for any length of time, the mudpuppy dies, for the lungs cannot supply the creature with a sufficient amount of oxygen. If exposed to the air for any length of time, the mudpuppy keeps its skin moist by a copious excretion of slime that completely covers its body.

In September and October the males seek out the females beneath flat stones on the stream bottom and hide with them until mating has occurred. Often only a single pair will stay together in one retreat, which may serve the female throughout the year; and at times many males and females may congregate beneath one large slab. After the mating period, the females leave this common retreat and seek a nesting place.

Since the mudpuppy is very exacting in its nesting wants, only a few parts of the stream will satisfy it. Unless the stream bed contains flat rocks for nesting sites, the mudpuppy is absent. And except for migrating individuals, the mudpuppy population of any stream is concentrated where suitable rocks occur. It makes its nest beneath flat stones, boards or logs out in the riffles but not in swift water and with the entrance on the side away from the current. The female attaches the eggs on the lower surface of the covering object in the water.

The egg laying season varies for it depends upon the temperature of the water. In western Pennsylvania, the eggs are deposited about June when the water temperature reaches about 76 degrees and they require about two months incubation. During this season the males are absent from the spawning ground and the females guard the nesting cavity until the young larva hatch and often later. After the larva leave the nesting cavity, they work their way out to the deeper pools, which adults do not inhabit, and remain here until they attain sexual maturity at five years.

The mudpuppy feeds on aquatic insects and their larva, worms, crayfish, fish eggs and fish. Due to their habit of feeding on the latter, an overabundance of waterdogs may be detrimental to fish. But in turn it is preyed upon by herons and crows; it is attacked by parasitic worms that attach themselves to the skin; and old adult mudpuppies feed on the eggs of their own kind.



The more shallow the water, the more accurate and careful the cast of bait or fly must be.

A pork rind lure is excellent for bass when used with a fly rod. Such a lure is made for the fly rod as well as for the casting rod and offers an opportunity for splendid sport.

Pennsylvania Fish Law Violations

Cases Settled During the Month of November 1948

Allegheny County

Jadot, Charles, 2050 Palmer Street, Swissvale. Illegal devices $20.00

Beaver County

Neese, John P., Monaca. One undersized bass 10.00

Cambria County

Yoder, Lynn, 154 Hattie Avenue, Johnstown. Fishing on Sunday without permission of landowner .. 25.00

Erie County

Tucholski, Carl, 603 East 13th St., Erie. Fishing without a license 25.00

Jefferson County

Barnett, Charles Emerson, R. D. No. 1, Summerville. Assisted in placing dynamite charge 100.00

Lackawanna County

Szymenski, Walter, 531 Foot Avenue, Duryea. Fishing without a license 25.00

Luzerne County

Cilvik, A. S., 741 E. Northampton St., Wilkes-Barre. Illegal device 20.00

Fisher, Theodore J., 23 Bergh Street, Hudson. Fishing without a license 25.00

Harris, Albert, 132 W. Walnut Street, Kingston. One undersized pickerel 10.00

Kubicki, Louis, 24 Union Street, Hudson. Fishing without a license 25.00

Yanuszewski, Marian, 390 E. Union Street, Nanticoke. One pickerel over possession limit 10.00

Lycoming County

Tebbs, Fred Thomas, R. D. No. 1, Montgomery. Operating motor boat in reckless manner causing fatal accident 50.00

Mercer County

Zubac, Anthony, 903 Spearmen Avenue, Farrell. Operating a motor boat in a reckless manner 25.00

Schuylkill County

Neumeister, Irvin, R. D. No. 1, Ashland. One undersized bass 10.00

Our Wildlife Today

By David A. Aylward
President National Wildlife Federation

A GENERATION of Americans have passed their lives under the shadows of world crises and destruction. Resources, both human and natural, have been subjected to exploitation and excessive demands. The one bright spot in the picture is the fact that man may manage those resources as he sees fit. That he has not always managed wisely is only too evident.

It is very different with our wildlife. They are dependent for their continued existence on the whim of mankind. Industry has crowded out their natural homes. Splendid forests and woodlands where wildlife once flourished in abundance have fallen to commercial interests. Waters once crystal clear have been turned to dumping grounds for all kinds of waste or choked by silt from denuded lands. Our birds, fish and animals need natural cover and food, places to rest, clear water in which to live and undisturbed areas where they may breed or nest without fear.

Far from being just an incidental product of the land and water, wildlife is one of America's most essential and valuable organic natural resources. Its part in the whole structure of nature through its continuous destruction of insects, rodents and undesirable weeds and plants is only too well known, even though frequently unappreciated by many. It plays a part further in the propagation of plants and trees through the dropping of countless seeds by birds in flight.

The conservation of wildlife is a big business. There are more than 20,000,000 people who hunt and fish. They contribute more than 50 million dollars to the state and federal official agencies engaged in the management of wildlife. The unofficial conservation agencies and organizations spend many millions of dollars more in their effort to preserve and restore our wildlife. Millions of people enjoy the national parks and other recreational areas. The total outdoor bill for sportsmen alone well exceeds 4 billion dollars a year. Add to this the vacation expenditures and the gross outlay of the American people in the pursuit of enjoyment and recreation mounts to a figure between 6 and 7 billion dollars. Song and insectivorous birds are estimated to save more than 300 million dollars worth of crops every year. They are worth protecting. Ducks geese, pheasants, other upland game birds, deer, elk, antelope, and other four-footed animals—large and small, and fish all play an important part in our outdoor pleasure and all are worth protecting.

The attraction and beauty that wildlife brings into the world can never be fully evaluated. It is also a crop that produces a major source of revenue for America's economy. Its continued existence is irrevocably tied in with the way we manage our soil, water and timber. If we waste our soil, we lose the source of our plant life so essential for food and cover for birds and animals. The destruction of our forests and pollution of waters brings a loss of natural habitat without which wildlife cannot survive.

This year—while the ugly menace of scarcity still darkens the world—America should bend every energy towards the betterment of its natural resources. Soil conservation—forestry management—and the cleaning up of our waters should be "musts" on everyone's list. The wise management of these basic resources will, in themselves, do much to maintain our wildlife. Good farming practices encourage wildlife through plantings of fence rows and farm woods, of plants to check erosion that are attractive to wildlife, the construction of farm ponds to aid in holding water. Forest management will keep us supplied with valuable timber by replanting and managed cutting and a protecting cover for the forest floor. This can be so planned that it will give food and shelter to many forms of wildlife.

Our waterways are tragically in need of public support. Aquatic life of all kinds has disappeared from many rivers because of industrial and domestic waste disposal. Adequate flood control is still a long way from established fact and lack of it results in a serious loss of good top soil, as well as a serious economic and human loss.

If we want to continue to enjoy our freedom and security, it is of first importance to safeguard our fundamental resources through wise management and to recognize that each is a part of the whole. Abuse of one can result only in loss to all.



R. B. McClelland owner of Sugar Lake Hotel, Sugar Lake holding a large mouth bass taken on a shannon spinner by Fred Schmeyer of Pittsburgh. Mr. Schmeyer failed to give us the length or girth of the fish but did supply us with the weight—7 pounds even.



A new lure pouch is announced by Rockland Tackle Co. of Hillburn, N. Y., one of the manufacturers and suppliers of spinning tackle. It is known as the "Spin-O-Pouch." It is designed especially for spinning lures. The hooks sink into a heavy pad of lambs wool that holds the lures in place. The cover of the pouch is soft, thick leather which prevents hooks from protruding. Both large and small sizes, that fit into any hip pocket, are available.

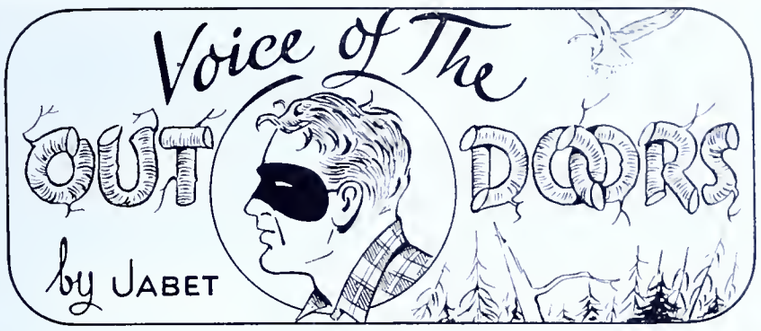
The following essay on cats was turned in by a grade school pupil:

"Cats and people are funny animals. Cats have four paws but only one ma. People have forefathers and only one mother.

"When a cat smells a rat he gets excited, so do people.

"Cats carry tails and a lot of people carry tales, too.

"All cats have fur coats. Some people have fur coats and the ones who don't have fur coats say catty things about the ones who have them."



"Oh! What a Beautiful Morning!"

Yes, the dawn of a new day. The awakening of all living creatures to the full realization that at long last the destructive hand of so-called civilized man is faltering. The wasteful, shameful and abusive outdoor practice of civilization is staggering in its tracks while the trees and the birds and the streams and all wild creatures are singing a glorious welcome to the sunrise.

Spearheaded by courageous leadership in Pennsylvania, a new and brighter day is dawning. Like Lochinvar of old, who, on his white charger rode to destroy the enemies of his people; this modern Lochinvar too rides a white charger, a white charger of pure clean streams which is stamping out the vicious enemy of his people. The repulsive monster, POLLUTION tried and convicted, now cringes, condemned before the bar of public opinion and indignation.

"From the mountains to the prairie to the ocean's white foam," the clarion voice of Pennsylvania re-echoes across the land. "The spewing of industrial poison and human filth into the streams of our state and nation must stop!" shouts the crusader—"and no man or group of men are big enough to halt our drive to STOP IT!"

Of course the paramount issue is public health and sanitation. Our right to live healthful lives. Our right to earn a comfortable living. All this and more too, but back of it all lies that inalienable heritage, the pursuit of happiness!"

Pennsylvania has sounded the keynote. The machinery for stream clearance is hammering and thundering down valley and dale. Industry and municipality have girded for the battle. Whistles are blowing and the hills and rills are reverberating with the hum and rumble of power shovels, bulldozers, tractors, trucks and heavy equipment as man, suddenly "stops in his tracks" to undo and correct the ignominy which he has so recklessly and carelessly developed in his ignorant and feverish haste to dispose of industrial waste and sewage. Yes, man now rises in all his might and fury to strike down and destroy the very Frankenstein which he himself created, before that same Frankenstein destroys him.

Clear across the land the momentum gathers, the drive for clean streams stampedes. Falling into ranks we find New York, Ohio, Michigan, Indiana, etc-etc-etc., all have awakened to the extreme importance of pure streams, and all are now engaged in comparable programs designed to reclaim their running sewers and reconvert them into pure running water again.

And from the far off deep dark recesses of Pennsylvania comes THE VOICE OF THE OUTDOORS carrying the message of woods and streams and all that dwells therein. The outdoors is happy, it is grasping the outstretched hand of deliverance. It has a new lease on life and in unison is singing a glad welcome to the sunrise, the sunrise of a new and glorious day.

Indiana Well On Its Way

A report just released by the State Stream Pollution Control Board of the State of Indiana, is of more than passing interest.

Sewage from more than 70 percent of Indiana's urban population is now receiving treatment in 82 municipal plants.

The board has issued 87 orders to municipalities and industries since it was organized.

Eighty-nine cities and towns now are planning sewage treatment plants or additions estimated to cost approximately $47,000,000. These proposed plants will raise the percentage of urban sewage treated to more than ninety-five.

Small cities and towns needing both extensive sanitary sewer installations and treatment works need a practicable method of financing such projects so that the service charge will not be excessive.

An attempt is being made to survey all industries of the state which cause stream pollution. Thirty-two of the 42 industries ordered by the board to abate pollution have either complied with the orders or have made substantial progress toward compliance.

All state institutions not having adequate sewage treatment facilities now are planning them. Two plants are under construction.

Much time was devoted to the investigation of fish killings and to the correction of the causes thereof.

The Oil and Gas Law of 1947, administered by the Department of Conservation, will be helpful in abating pollution caused by oil losses and brine.

Here's One for The Book

A fish which produces only female offspring and defies the efforts of scientists to find out why, is being studied by biologists at the University of California's Scripps Institution of Oceanography.

Mollienisia Formosa is its scientific name. It is called Amazon Molly for short. It is described by Dr. and Mrs. Carl Hubbs, of the Scripps Institution, in the *Aquarium Journal.*

Amazon Molly is a minnow a little over an inch long, found in streams of northern Mexico and Texas. Doctor and Mrs. Hubbs have collected them by thousands but never yet have found a male among them.

They tried crossing Molly with other species in an effort to give her a male heir. In twelve years of laboratory breeding the Amazonians have produced 8,000 offspring—all female.

The young not only are females but look just like their mothers.—*Texas Fish & Game.*

Black Lures Catch Fish

Look over the contents of the average angler's tackle box, and it's a safe bet that few, if indeed any, black lures will be found.

There will be creams and browns, grays and whites, and almost all other colors, but the solid black wet or dry fly, plug, or bass bug will be conspicious by its absence.

Yet every fisherman who has opened the stomach of a freshly caught trout knows that black is the predominant color of the insects which he finds there. And the angler who does a bit of experimenting quickly discovers that black lures are among the most effective used.

Black dry flies of the spider variety—that are tied minus tail and wings and with a generous spread of hackle on a gold hook—are good for shy trout. Frequently, in fact, they are the only types of dry flies which will produce strikes when the fish seem on a voluntary fast.

They are good in shallow flats, if fished carefully with a long, fine leader, and they also ride excellently on heavy riffles. Sometimes they alight upright, and sometimes flat, with their hackles fanning out on the surface of the water all around them.

But they are so appealing that when a trout takes one of them, the hook usually sinks deep inside the mouth.

Black lures are excellent for bass fishing, too, although if much night fishing is done a dark brown lure will do just as well.

Bass bugs made of black deer hair are favorites among the veteran night bass anglers. Black spinner flies have taken many a nice bass. Black plugs, of both the diving and the surface types are good fish getters.

Streamer flies which have considerable black color also are used widely for both trout and bass. And outstanding nymph patterns are largely black or very dark brown.

Black flies are easy to see. A black spider never gets lost on a rippled surface that reflects the light of the sky. A black wet fly is more easily distinguished than almost any other color beneath the surface of the water.

The important point, however, is that black lures also are very easily spotted by feeding fish of all kinds. And this is true even during the darkest night, for the black lure produces a very obvious shadow against the background of a starry sky at which the fish looks.

So try a black fly or a black plug the next time trout or bass develop a streak of temperament. And make sure that the selection of lures in your tackle box includes a goodly number in black.

—*Texas Game & Fish*

GOD SAVE THE KING

(*From page 7*)

would have been sufficient to identify it as a white footed wood mouse with trailing buck hair legs and tail. Without haste this was attached and the knot examined critically. Satisfied with his inspection he laid the rod on a bit of drift wood and arranged the leader in a backwater bay. Seating himself on the sand with his back against the gray stone he lighted his pipe and watched with interest the reflection of the after glow in the surface of the Blue Hole.

Charley had often heard his father and other old guides talk of the time when native trout measured by pounds rather than inches had been taken from the deep pools of Mosquito Creek. His skill at the art of tying artificials and the trout that fell to his cunning only served to bring forth an amused tolerance and more stories of the mighty trout of the past.

Discovering the King had been an accident. The autumn before when placing the watchers for a bear hunt he had cast a hurried glance into the depths as he passed the Blue Hole. His woods trained eye had caught the outline of the King as he rested beside the sunken log near the pine roots. The white edge to the fins had registered and stopped Charley in his tracks. A second closer look had verified the fact that here was truly a native trout of the proportions of another day.

All during the winter the preparations for the coming season were intensified by the image of that dark shape. The new season had come and was now nearing an end. The only encouragement from the King had been one half hearted roll to a streamer dressed in imitation of a dace.

Last week in making his way into a position for an hour's observation of the pool an early foraging deer mouse had been disturbed by Charlies boot and in its fright had scurried down a projecting root and jumped into the pool. It struck out bravely for the opposite shore but had gone but a few inches when it disappeared in a swirl. The brief action had been accompanied by a glimpse of the King's broad back and frayed dorsal fin. So the King liked mice!

Laboring at his vice Charlie had finally completed an imitation that he hoped would strike the fancy of the giant trout.

Just as the twilight deepened into dark a swirl broke the smooth surface of the pool. Rising from his seat Charley picked up his rod and moved up the bar. The low skimming bat paused in mid flight then darted to the surface, another swirl marked its passing but whether or not the King succeeded in its capture Charlie could not see. Waiting for some minutes he began to false cast toward the projecting root where a week before the mouse had jumped to its doom. Gaging the distance as well as possible against the shadows, the mouse dropped within inches of the root. Carefully taking in the slack he shook the rod slightly then drew in a few inches of line. At the swirl the rod came back hard and the stout hook went home in the tough mouth cartilege.

Fighting the pressure of the restraining line the King thrust himself deep toward his lair in the roots but the pressure turned his head until the heavy current in the center of the pool sent him down to the deeper still water. Time and time again he tried for the roots only to be forced away. Dropping down with the current once more he lay shaking his body from side to side trying to rid himself of the stinging cheat that clung to his jaw and hampered his freedom. Resting quietly to recover his rapidly waning strength he was goaded to action by strumming vibration that stung every fiber of his body.

As the big trout lay sullen on the bottom Charley plucked at the taunt line and let it snap against the rod. This trick would start the most sulky trout into a frenzy of action. Coming to the top the King spent his ebbing strength in a flurry of rolls and surges that left him lying at the surface. Slowly he was drawn to the edge of the bar. Turning on his pocket flash Charley examined the King as he lay feebly in the shallows then stooping he released the battered lure. Holding the King upright for a moment Charley gave him a gentle push toward deeper water and followed him with the light until he disappeared under the roots of the blasted pine.

Through the haze of tobacco smoke I saw Charley enter the lodge that night and place his rod in the rack. One or two of the older anglers looked at him and inquired as to his luck. His answer was noncommittal but a satisfied smile played around his mouth. As he stretched his length in a near by chair I tossed him a cigarette and as I did so I heard him hum what I thought was America. Later I discovered he was humming GOD SAVE THE KING.



Paul Berkebile of Hollsopple and a brown trout which he caught April 24, 1948. This nice fish had a length of 27¾ in. a girth of 12¾ in. and weighed 8 pounds.



Two dandies. Arlene Helsel daughter of Mr. and Mrs. J. F. Helsel of Lakemont, Altoona and her 17½ inch brown trout she landed while fishing at the "Paradise" the past season. The fish weighed 3 pounds.

Johnny and Mary went into the country to pick some wild flowers. Mary's mother went with them, so they picked wild flowers.

THE RAINBOW TROUT

(*From page 6*)

as light as possible and the reel ther single action like the Imperial, or tomatic.

Any standard wet or dry flies rang- g from the tiniest sizes up to large reamers will be found alternately od. Small fly rod spoons, bucktails d wobbling lures like the midget ver runt are excellent in deeper, rger streams.

Casting rods like the "Pal" in the 5 d 5½-foot lengths, lighter actions, hen used with the smaller casting res like river runts in both floating d diving models, are becoming more pular each year. The lighter test es in the 6 to 10-pound range are eferred together with a lightweight sting reel. A long nylon leader of ual poundage should be used.

Spinning is ideal in some of the rger streams, for with this type of tfit it is possible to attach a 1/8 or 16 oz. weight to a fly and cast it uch farther than it is possible to ach with a fly rod or casting rod. n ideal lure for spinning is the midget git.

Most trolling for rainbows is done ly in the larger lakes and streams, d the standard lightweight casting ds like the "Pal" and casting reels e the "Pal" are excellent. The use all nylon leader is recommended and y of the smaller lures such as midget ver runt or midget digit are produc- ve. Some trollers prefer the stiffer tion fly rods and troll slowly around e "drop-off—" that is, where the oreline suddenly drops into deep ater.

In the past, many scientists classified e Kamloop (rainbow) trout as a parate kind, Kamloops or Kootenay out, *Salmo kamloops*. Now, how- er, it is agreed that this is merely giant rainbow grown to gargantuan oportions because of ideal environ- ent.

This particular trout has attracted tionwide attention to Lake Pend Orielle, Idaho, where they were not tive but were introduced in 1942 hen a planting was made. Almost mediately, a new world's record was t and has been broken every succeed- g year since.

The explanation for this phenomenal owth is the superabundance of small ueback salmon upon which these inbow trout feed almost incessantly. ost of these trout are taken by troll- g at an unusually fast speed; large ugs like the basser and lucky 13 are ed and standard deep-water trolling tfits are preferred.

A Crab That Never Gave Up

Up in Maine they caught a lobster that had four well developed claws. Reminds us of a hard crab we heard about years ago. Seems as though this crab was a big feller when he was caught. Instead of cooking him all at once, the feller that caught him broke off his claws and cooked 'em, putting Mister Crab back into the water in a flat float built especial for the purpose. It wasn't long before that crab grew new claws, and the feller broke 'em off and cooked and ate them. The process was repeated so often that summer that the feller got gorged on crab meat and late in the fall turned the crab loose, with a full set of new claws, and by grab, that crab like to bit one of his fingers off when the feller was puttin' him overboard, an' then the crab lit out a flyin' for the Capes. Now there's something for scientists to work on: Why can crabs grow new claws an' men can't grow a decent mustache, let alone a finger or an arm?—*Maryland Tidewater News.*



H. G. Raymond of Oakmont and a very nice pike from the Tuscarora Creek near East Waterford, August 2nd. The fish was 25 inches long and weighed 3 lbs. and 14 ozs. The pike fell victim to a jointed Riverrunt plug.

THE FABULOUS QUILBY MINNOW

(*From page 15*)

it is cleaned. Colored chenille or wool is put inside the translucent body to give it the pink color of a shrimp or the exacting variations in the hues of a food fish. The head is filled with melted lead for weighted models or with plastic for unweighted types, and is slanted to an exacting degree to aid its proper action in the water. The head is painted red during construction, and eyes are added to complete its lifelike appearance.

Lest America's thousands of fly tyers and plug makers decide to try to make the lure at home, I should add that it is fully protected by United States patents. Moreover, several intricate specially built machines are required to put it together, so prospects for home manufacture are discourging. In spite of the many operations in its construction, the Quilbys sell for a dollar or less, which is a very reasonable price considering the effort required to make them and the amazing number of big fish they catch.

The Quilby was invented by William Miles, who is a patent lawyer as well as an angler. He made the machines and the lure itself in a home workshop up until recently. The demand for Quilbys soon far surpassed his limited home output, so the business was turned over to The Pequea Works, Inc., of Strasburg, Pennsylvania, who make more leaders and snelled hooks than any other company in the world. So, as the thing stands now, Mr. Miles has gone back to his law business and his fishing, and a large manufacturer is turning out ample Quilbys for everybody.

After finding the Quilby so successful, I wrote about it in my book "Spinning for American Game Fish," and I sent Mr. Miles some photos of big fish I had taken on his lure. The friendship which ensued between us gave me the material for this story.

Now, lest I give the impression that the Quilby is the answer to filling the creel under all possible conditions, I hasten to add that I have been skunked with it several times. There are conditions, as every angler knows, when fish will not take anything—even live bait. However, if I were limited to only one lure, I am sure it would be the little Quilby. If fish will take anything at all, the Quilby is their meat and, for my money, it is one of the most ingenious and successful lures I have ever seen.

With the Outdoor Writers

The Outdoorsman

in the York Dispatch

George W. Gnau, Wrightsville R. D. 2, is one of York county's oldest rivermen. His entire 78 years were lived in Wrightsville and vicinity. As a young man he worked on the old river canal and tells many stories of fishing both in the Susquehanna and the canal that paralleled it.

His work on the canal sometimes called for removing silt and mud which gathered there preventing the free passage of the canalboats. The boats carried coal, grain and lumber which he helped unload for warehouses in York county. A canal-boat was pulled with three or four mules.

Fishing for catfish, suckers and mullets was as good in the canal as in the river but shad were never taken there. Shad and bass were numerous in the river but seldom were perch or wall-eyed pike (Susquehanna salmon) caught.

One of the favorite spots in the river for fishing at that time was "the point" at Accomac. Expensive rods, lines, and reels were unknown. Everybody used a pole cut from a nearby tree approximately one inch in diameter and from eight to ten feet long. With this equipment and heavy cord it was easy to catch a stringer of fish. Gnau never used a moon-rake or dipped for fish. He seined for commercial fisheries but for his own use he preferred the hook and line.

Before the power dams were built preventing the free migration of fish, he says shad were so numerous in the spring at Wrightsville and Accomac that they were almost a nuisance.

The shad was not the only great food fish that inhabited the Susquehanna river about 75 years ago in great quantities. Pike-perch (Susquehanna salmon) in countless numbers and of large size were to be found everywhere from the Chesapeake bay to the headwaters of the main river and in the large tributaries.

Just how the pike-perch became an inhabitant of the river is something of a mystery. The most plausible story of their introduction is related by Hon. Simon Cameron.

He says that shortly after the war of 1812 a Jesuit priest and an Englishman living on the banks of the Susquehanna, who had previously seen the pike-perch in Senaca Lake, N. Y., conceived the idea of transplanting them to the waters of the river on which they lived.

They made the journey to this lake, captured several specimens and brought them safely to Chemung river at Elmira, a tributary of the Susquehanna, where they were set free.

In the report of the Pennsylvania Fish Commission for 1892 is found the following information on this valuable food fish.

The pike-perch feed on the bottom upon other fishes and has even been charged with destroying its own young. It prefers clear and rapid waters and lurks under submerged logs and rocks from which it can readily dart upon its prey. Spawning takes place in April and May and in Pennsylvania continues until June. Only a small percentage of the eggs are hatched. The greater portion are driven upon the shores by storms and devoured by fishes at the spawning beds.

"Dexter," in *Forest and Stream*, Aug. 14, 1890, makes the following statement about its habits in the lakes:

"The fish run up the rivers before or as soon as the ice is out, and after spawning lie off the river's mouth feeding on and off the sand flats, as the spring rains bring down plenty of worms and probably other matter they feed on.

"As soon as the water gets warm they work along the shores in two to 30 feet of water. They are bottom fish, and to fish for them successfully we must go to the bottom for them. They are nearly as particular as salmon-trout about the water they inhabit and consequently rank very high as a food fish, being very white, solid and extremely free of bones."

Joe Pancoast

in the Philadelphia Bulletin

Recently in this column information was given concerning fishing in that portion of Lake Conowingo lying within the boundaries of Pennsylvania. Here are additional details:

The three most popular species of fish sought in Lake Conowingo are black bass, walleyes and catfish. The latter may be either the channel or ordinary varieties Perch, sunfish and calico bass are als present.



Joseph Hoehn of St. Marys and the fine brown trout 24¾ inches long and weighing 6 pounds 4 ounces which he caught from one of Cameron County's fine trout streams.

At most any time of the year Conowing Lake fishing should be good. However, i large waters such as Conowingo Lake, th big problem is to locate the fish. That ca only be solved by the individual angler th day he happens to be fishing.

Once a strike is secured whether it is du to a change in location, baits, lures, fishin methods or a combination of these, the wis angler will carefully note the location b taking two sightings at angles which wi give his position at the point of intersectio Method of fishing and bait or lure shoul also be filed mentally.

Walleyes, calico bass, sunfish and perc usually travel in schools and if one hooked the chances are others are nearb The same general location that produces on bass or catfish will often give up others sinc the presence of these fish in any given are indicates it is either a favorable resting feeding spot according to conditions pre vailing at that time.

There is one alibi for an empty string th shouldn't be used after a day fishing a larg landlocked body of water. Conowingo lak in addition to being liberally stocked eac year can never be "fished out," by any leg means used by sportsmen. Barring pollu tion, poisons or extensive illegal practice Conowingo lake will always contain a good supply of fish. To repeat, the problem is find them. That operation is a lot easier sa than done.

To offset this disadvantage the big lak offers a variety of fishing so that if o species or style of angling is unproductiv something else can be tried that may elim nate a total blank for the day.

Pennsylvanians should also note the low portion of Conowingo lake lies within th borders of Maryland and inquiry should b made locally as to the landmarks in ord to avoid straying over the boundary line wi the possibility a Maryland warden may b come interested. There are several hundr square miles of water on the Pennsylvan side of the border to keep Keystone rod a reelers busy.

Live bait fishermen heading for the la should obtain a supply of their favorite lu to take along. Neither of the two bo liveries have bait for sale.

As previously mentioned, anglers hitti the region for the first time are going be aware of the wilderness aspect of an ar so near Philadelphia.

The reason becomes apparent by looki at a map. At only a few widely separat points can the lake shore be reached by ro Except for summer cottages in the vicini of these spurs and forgetting the railro tracks on the eastern bank it wouldn't hard to believe that one was miles fr civilization.

In fact the only bald eagle refuge in th country is located on an island in the lak It is known as Mt. Johnson and is a san tuary established by the Audubon Socie

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There's no good in looking back, unl it's when you're pulling out from the cu

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The height of embarrassment—two e meeting through the same keyhole.

LUMBRICUS TAKES A BOW

(*From page 5*)

e lively crawlers, he gathered up his tfit and said: "Let's get going, we're asting time."

I wasted a happy grin in the dark-ss.

Within twenty minutes we caught o more browns, a fifteen-incher and other slightly smaller. Fish enough r anybody so we called it a night.

No expert trout fisherman will spurn e use of worms. In the spring when reams run high and roily they are dispensable. Then, again in midsum-er when the water is low and gin clear d the fish have ceased rising to in-cts except in the evening. Under ch conditions there is nothing that ll take trout as consistently as well-oured, thoroughly hardened worms. ost of the great English anglers con-ler clear water fishing with worms a stinguished art. And as a means of lling fish they readily admit that it is cond to none.

It has been my observation that the re one knows about trout and their pture, the more he realizes the value worms. Why do we insist upon oosing the trout's fare and stubbornly er it dainty food of the air borne, nen in all probability it is hankering a juicy bunch of worms?

Some one aptly said that a swallow es not a summer make nor fish a hing trip. If things are so relatively relevant, does it matter much what nd of bait one uses? Worms or flies, nnows or plugs. They are all a eans to an end and that does not al-ys entail the taking of fish. Old l. Robert Venables said a mouthful nen he wrote:

"And suppose he take nothing, yet he enjoyeth a delightful walk by pleasant Rivers, in sweet Pastures, amongst odoriferous Flowers, which gratifie his Senses, and delight his Mind; which Contentments induce many (who affect not Angling) to choose those places of pleasure for their Recreation and Health."

When you question your wife's judgment, member that she married you.

---

wo rust-proof brackets, placed one each e just below the gunwale of your rowing t, will act as good oar rests when your s are not in use.

he brackets should be of a width and th to conform with the size of the oars y are to hold.

---

ast your fly well ahead of a cruising , otherwise you are likely to frighten n when your lure strikes the water.



Thomas Kapis and a prize winning large mouth bass taken from the No. 4 dam of the Citizens Water Company at Washington. The fish was 24½ inches in length and weighed 7 pounds and 14 ounces. The lure used was a Hawaiian wiggler.

Hatcheries Plagued by Shortages

In addition to the more or less routine headaches that go along with the operation of a fish hatchery, Michigan conservation officials are now faced with a shortage of food for the growing fish, and an ever increasing cost of supplies. For a time during the war when the shortage of tin for cans made it impossible for processors to pack dog and cat food the hatchery men were able to purchase large quantities of packing house by-products that made excellent food for fish. Now that the cans are again available much of this material is being used in special household pet diets and is no longer available for hatchery use. Operators of mink and fox farms are also competitors of the hatcheries for this type of food.

State owned hatcheries operating in the Great Lakes region may soon have to follow the lead of eastern hatcheries who are now feeding the growing fish with large quantities of frozen ocean fish, supplemented with smaller quantities of packing house by-products and dry meals.

The cost of food for hatcheries has increased from 100 to 300 percent and many hatchery men are wondering just how long they can continue to operate and justify the increased operating expense by the results obtained. The hatcheries operated by the Michigan Conservation Department will use almost 2,000,000 pounds of fish food in a year. At current market prices this is valued at more than $150,000.

The man who enjoys running after women has trouble nowadays finding women who will run.

STREAMS HAVE CHARACTER

(*From page 9*)

dropping a fly a time or two in intervening pools as he moves from riffle to riffle.

The small trout stream riffle presents an ever-changing opportunity to attract fish to the fly.

Here the water curls around a rock that extends above the surface of the water. Over there a rock ledge forms a miniature waterfall. Down below the water twists over against the shore, swinging back into an undercut bank and beneath the gnarled roots of a tree. Above a short distance is a spot where some freak of spring freshets has gouged a deep crease in the bed of the stream.

Or, the riffle may double in its center, pile up its water in fury, and roar down into a pool that is deep and dark and green.

It is quite obvious, finally, that riffles and glides offer a tremendous variety of situations for the angler to solve, and that they deserve all the study and observation of which the angler is capable.

They will pay rich dividends in fishing pleasure if they are made a part of the angler's effort to learn all he possibly can about the trout and bass waters which he enjoys.

Mexico Seeks Cheap Source of Animal Protein for Poor Class

To provide an inexpensive source of valuable animal protein in the diet of its low-income groups, Mexico is stocking reservoirs, hydroelectric dams and irrigation impoundments with fresh-water fish and is developing a program of rural fishponds, Milton J. Lindner, chief of the United States Fishery Mission to Mexico, has reported.

Lack of natural lakes and suitable rivers, periodic rainy seasons, and the use of most of the streams in the central plateau region for irrigation purposes have blocked the growth of the country's fresh-water fisheries.

Bluegills and large mouth black bass have been found "to do quite well" in central Mexico, Mr. Lindner said. The absence of hatchery facilities, so far, has limited the work with these species to small-scale introductions. Improved production and stocking techniques shown by the mission also have heavily increased the stocking of trout in inland colder waters.

A marine fishery laboratory has been built at Guayamas. Investigations include tagging experiments on shrimp, and the collection of catch statistics and oceanic data on tides and temperatures taken on important fishing grounds. The investigations will show the extent of Mexico's marine fishery resources, Mr. Lindner believes, and will determine future expansion of the fishing industry.

FISHING PHOTOGRAPHY

Winter Cameras

By Frank J. Floss

(Photos by the Author)

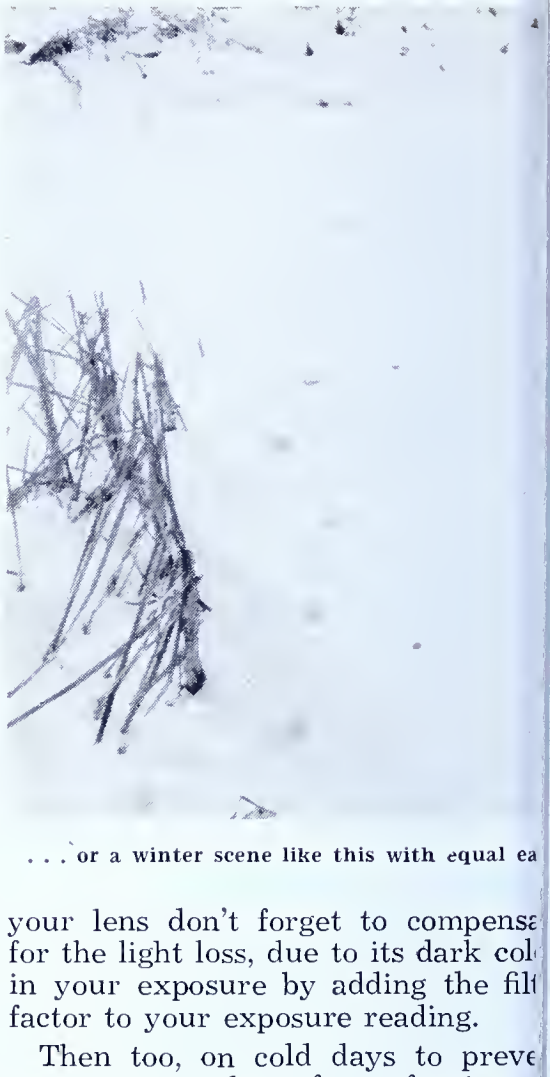
Hold it! Just a minute Mr. Fishing Photographer, don't put that camera of yours on the shelf just because the snow swirls around outside. That's a versatile piece of equipment that you hold in your hands when you take a photo. It's not just a fair weather friend. It will perform just as well on snow covered banks and ice ladened waters as it will on summer skies and rippling waters.

You will find a new thrill awaiting you in shooting winter photos. The streams you fished and photographed during the summer take on a new look when old man winter clothes them in the finery of virgin snow. The low winter sun with its long depth-giving shadows will always add a new perspective to an otherwise old scene. Thus an old oft-taken scene becomes a new and different scene when taken when the snow of winter is on the ground.

Don't you believe me? If you don't just get that pix snapper of yours and shove a roll of film in it and take a little hike along one of your favorite streams. When you return and develope those winter photos I'll bet you two to one that you'll be raring to go out again the first chance you get.

Here are a few tips that will help you get started on those winter scenes —Snow scenes photograph best early in the morning and late in the afternoon. This is because at those times of the day, the shadows are long and they help balance the composition of a photo. They also provide a plane to work from even on the most barren snow. These light and dark areas can be used to lead the eye into or out of a photo in the same way that a country road does in a summer scene. However, you can't just walk up and snap a snow scene; look it over from all angles first. Then after you have studied it pick out the camera angle that will give you the most pleasing composition and snap your photo from there. True as it is, that sometimes a good photo is made in the wink of an eye, careful planning of a scene will always result in better photos.

The use of a 2X yellow filter is a must for snow scenes. It will prevent the snow from taking on a whitewash look and bring out the texture of the snow. But when you slip one over your lens don't forget to compensa for the light loss, due to its dark col in your exposure by adding the filt factor to your exposure reading.



. . . or a winter scene like this with equal ea

Then too, on cold days to preve your camera lens from fogging carry it under your coat. And if t weather is below freezing be care of your breath, for if you blow it the lens or filter it will freeze the and cause your photos to be blurr

Also during the winter months wh the sun is weak you will have to ma longer exposures to get good detail your snow scenes. Therefore eith use a tripod or rest your came against a tree to steady it while ma ing your exposure. Never hold yo camera in your hands for any exposu under 1/100 of a second.

But do take your camera outdo regardless of the weather, for win time is camera time, too. Believe n taking your camera outdoors to hu for pleasing winter scenes to pho graph will save you from many d days indoors. Try it now, won't yo



Your camera will take a summer scene like this . . .

There's a way to have two tapered li for the price of one. Get a double-tape line and cut it in half. To each half sp a length of level line. It's logical, beca only one end of a double taper can be u at a time.

The month's absent-minded contest won by the druggist who was asked if had a wife and he replied, no, but he something just as good.

The Warden Is Your Friend

PENNSYLVANIA'S
ANTI-POLLUTION PROGRESS

Bridgeport Ordered to Install Plant for Sewage Treatment

An order has been issued by the Sanitary Water Board in furtherance of the Clean Streams program, to Bridgeport, Montgomery Co., to construct additions to the existing sewage treatment works to provide complete treatment of the municipal sewage, and to have the additions in operation on or before July 1, 1950. This is the fourth sewage treatment construction order issued in the drive to abate pollution of the Schuylkill River.

Plans for the addition to the Bridgeport plant which were submitted by the borough in compliance with the Board's requirements, were approved and a permit was issued Oct. 31, 1947 by the Board. Construction of additions to the sewage treatment works to provide complete treatment were previously issued in the case of Norristown and Royersford, and an order for the installation of a sewer system and the construction of a complete treatment works was issued to Ursinus College, Collegeville, located along Perkiomen Creek, a tributary of the Schuylkill. The communities are located along the river.

Orders requiring the submission of plans for sewage treatment works have been issued to all municipalities along the Schuylkill and it tributaries which do not have treatment works. Those municipalities above Reading must provide primary treatment, while those communities below Reading which have treatment plants must provide for complete treatment of the sewage.

Issuance of orders requiring construction of sewage treatment plants and additions to existing works to step up the degree of treatment, is a continuance of the intensive drive inaugurated some time ago by the Board to clean up the Schuylkill because of its importance as a public water supply. The drive has resulted in practically eliminating the discharge of silt to the river from the 47 coal breakers along the waterway and its tributaries. It is estimated that at least two million tons of silt was discharged annually to those waterways before the installation by the breaker operators of the desilting and reclamation systems under orders of the Sanitary Water Board.

Sharon Steel Treats Liquors

The Sharon Steel Corporation at its Sharon works is operating acid neutralizing facilities for the treatment of spent pickle liquors which is the used acid resulting from the cleaning of the steel during its manufacture. This treatment is being carried on to reduce stream pollution from the wastes in furtherance of the Clean Streams drive of the Sanitary Water Board. The Company is operating a two-stage method of treatment developed at the Mellon Institute by the American Iron & Steel Institute Fellowship, which is a new development in the neutralization of spent acid wastes. The first step in the treatment of the waste waters is effected by mixing finely pulverized limestone with the spent pickle liquors in mechanically operated mixing chamber. This is followed by further treatment of the partially neutralized wastes with high grade quick lime. After the treatment is completed the slurry is drawn off to drainage pits, from which it is removed in railroad cars to dumping grounds. Another interesting development in the treatment of the waste waters is the experimental studies being conducted in an endeavor to convert the neutralized slurry to a building insulation Board.

In addition to the mill waste treatment system, the company recently installed a sewer system and a pump station for collecting all of the sewage now being discharged to the river and diverting it to the adjacent city sewage treatment works.

Juniata River Survey Under Way

A survey has been started of the Juniata River to determine the extent of pollution in that stream and the polluting volume contributed by each industry and municipality located along the waterway. The work is being done by the Industrial Wastes Division of the Health Department Bureau of Engineering, which is executing the Clean Streams program.

Nineteen points have been selected along the stream between the headwaters near Altoona and Newport where samples of water will be taken for analysis in the Health Department laboratories. To establish the condition of the river under normal conditions surveys were made during the warm weather season and during the periods of high and low river flows.

A similar survey of the Schuylkill River is now under way, excepting that it is confined to the degree of pollution of the river. Samples of water are taken at 32 points, 30 of which were newly designated for the purpose. Two of the eight stations of the Department of Forests and Waters which are used to determine the river flow, are also being used for pollution sampling.

The high water survey has been made along that river. The warm weather sampling also has been completed. Similar analyses will be made after dredging operations to remove the accumulated silt from coal breakers, will have been started by the Department of Forests and Waters.

The surveys on both waterways are under direction of F. B. Milligan, head of the Industrial Wastes Division. They are of an exhaustive nature, involving the services of about 10 engineers in making the surveys and in compiling the data. A special laboratory has been established in the quarters used also for laboratory purpose by the Department of Forests and Waters at Schuylkill Haven where most of the analyses will be made in future surveys.

Board Calls Residents to Pollution Abatement Meeting

An opportunity "to abate by cooperative effort or otherwise," sewage pollution of Ten-Mile Creek, was recently given by the Sanitary Water Board to 69 residents of Franklin Township, Greene County. In an effort to solve the problem of pollution by the residents of the area, the Board arranged a meeting which was held last October in the East Franklin Grange Hall near Waynesburg, it was attended by Division Engineer L. S. Morgan and District Engineer R. W. Kremer, of the Greensburg office of the Bureau of Engineering, State Department of Health.

In a survey made some time ago by the Bureau, of the pollution situation in the area, 99 residents were found to be causing contamination of the stream. Notices were sent to each one ordering abatement of the condition. Of the number charged with causing pollution, 24 residents have complied with the orders of the board, according to the records of a second survey which also disclosed that six of these charged originally were residents of a housing project which is responsible for providing abatement.

In letters announcing the meeting the Board states that "inasmuch as the responsibility of complying with the Board's order rests directly upon you, we urged that you or someone representing you, attend the meeting."

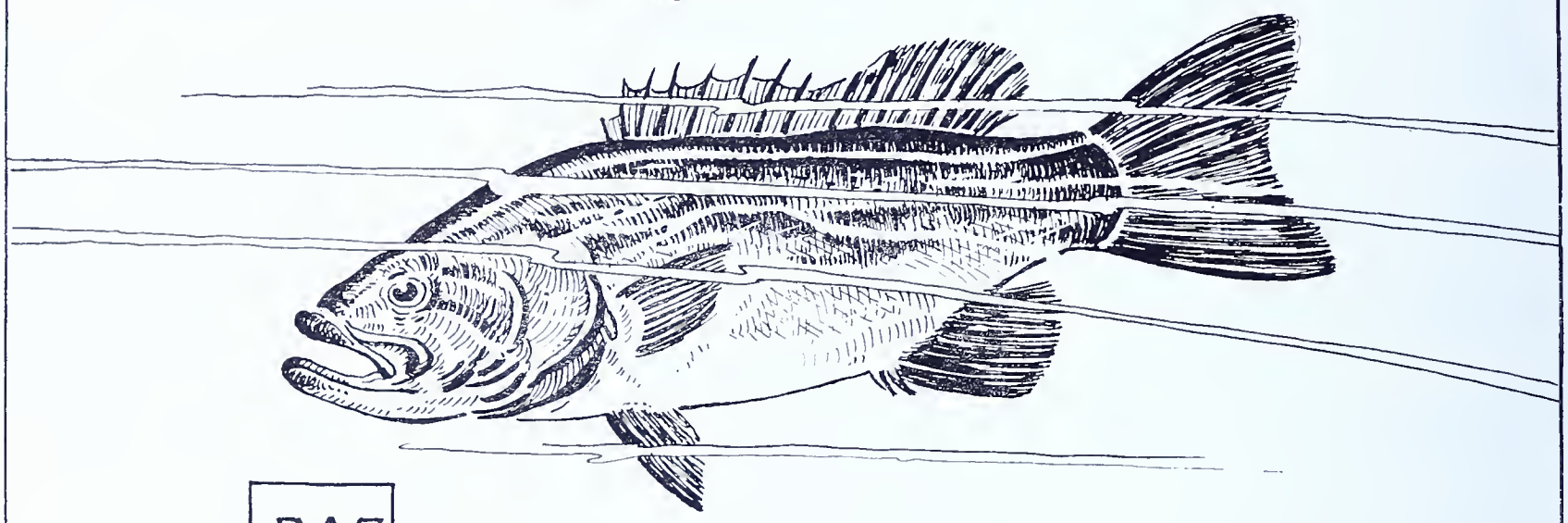
Pulp and Paper Committee Makes Study for Pollution Abatement

Definite steps have been taken by the Pulp and Paper Waste Disposal Committee of Pennsylvania in cooperation with the Bureau of Enginering, State Department of Health to make detailed studies and analyses of all types of paper mill wastes for the purpose of setting up standards on an industry-wide basis for the abatement of pollution of the streams to comply with requirements of the Sanitary Water Board under the Clean Streams program.

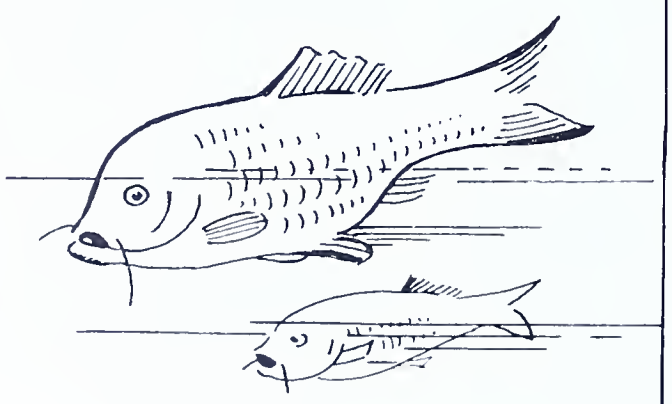
The Board has issued orders requiring abatement or preparation of plans to individual paper mills and in a number of cases treatment works are being installed but none of the installations will accomplish the degree of treatment necessary, since further studies of various wastes is necessary in order to plan methods of treatment. The Pulp and Paper Waste Disposal Committee, representing all types of paper mills is setting up committees for each type of mill to collect waste samples for analysis and to make complete reports on all phases of possible treatment. The data will be used to prepare, with the cooperation of the Bureau of Engineering, standards for treatment for the industry as a whole which will be submitted to the Sanitary Water Board. If they meet with the approval of the Board they will be adopted and will constitute the requirements to be met by each mill.

STRANGELY ENOUCH

owen PENFIELD FOX.



WHEN WATER FALLS BELOW FIVE PARTS OF OXYGEN PER 1.000,000 PARTS OF WATER, FISH CANNOT LIVE.....

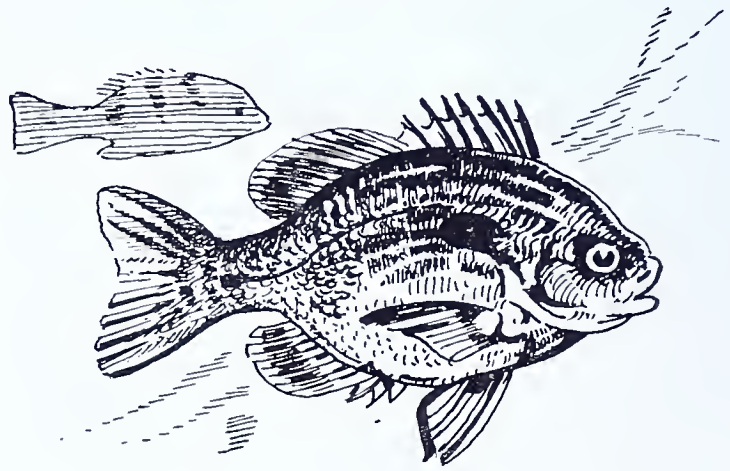


CARP.

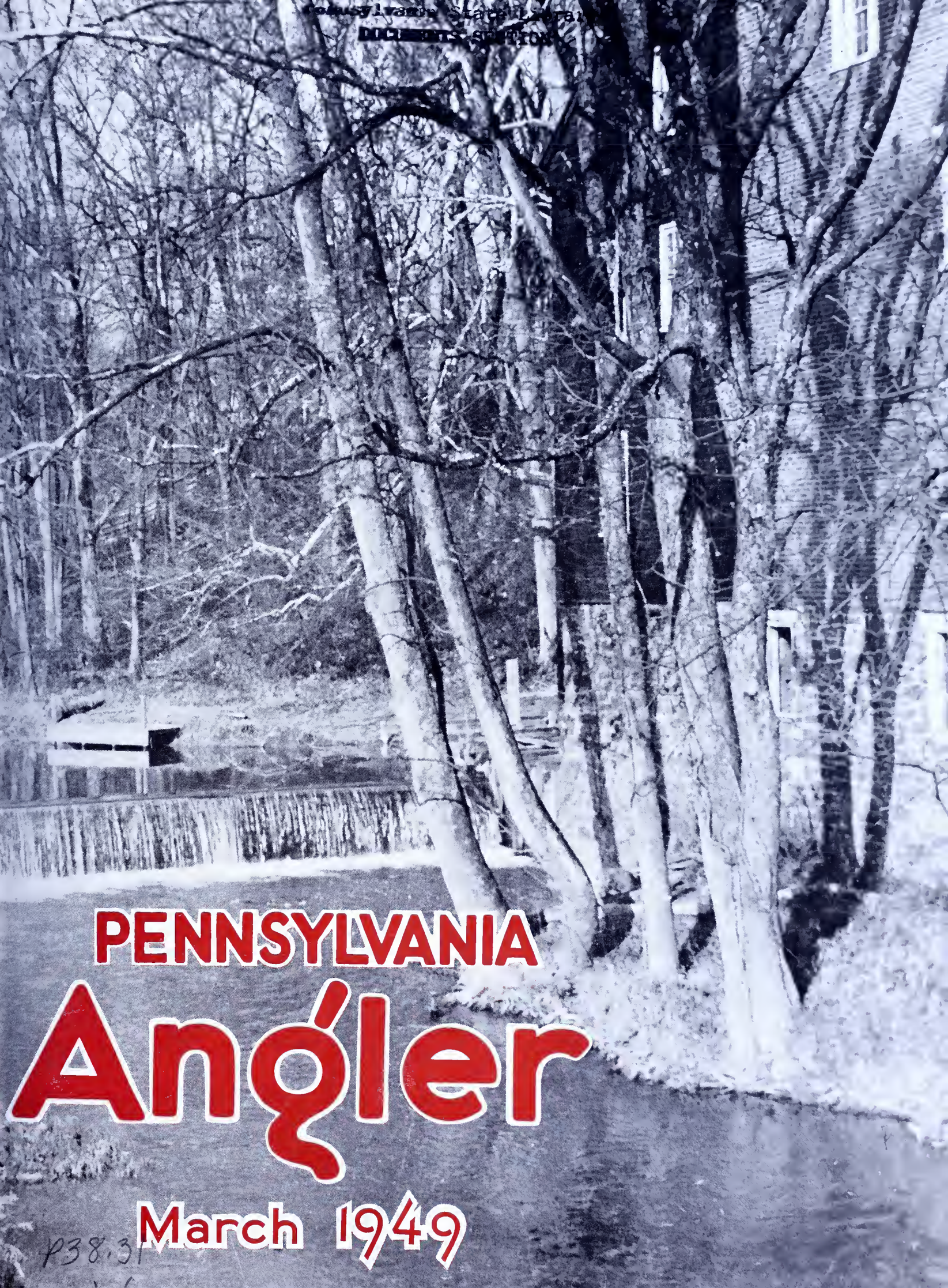
MATURES FAST AND LIVES FOR 100 TO 200 YEARS.

THE BLUE BREAM

MOST POPULAR OF ALL PANFISH AT TIMES GROW TO WEIGH OVER TWO POUNDS.



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March 1949

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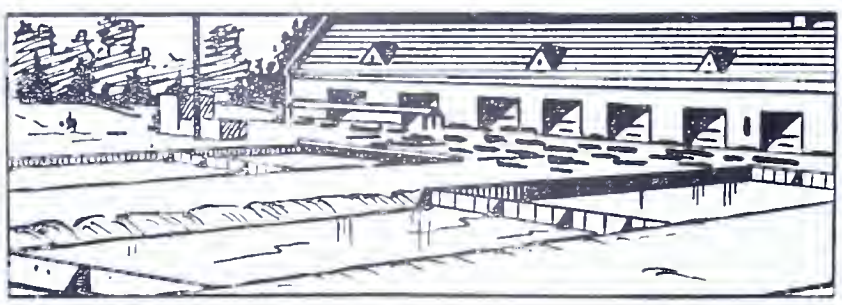
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COMMONWEALTH OF PENNSYLVANIA
BOARD OF FISH COMMISSIONERS
HARRISBURG, PA.

The Angler

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The Cover . . .

is a scene on the Yellow Breeches Creek at McCormick's Mills near Cona. The Yellow Breeches flows through Cumberland County and is one of the State's better known brown and rainbow trout streams. We owe credit to Marty Myers, who lives along this stream for the exceptionally fine photo.

The End of the Row

Down at Cyrus Littlebee's one night, I was railing against people who persist in exploiting natural resources. Particularly, people who already had all the wealth and power they needed. I wound up saying that it almost seemed men who had the most to lose were doing the least to prevent the losses that must come to those who waste. In the end, I said, it would be the long-suffering "little fellow" who would fight the conservation battle.

Cy never answers an argument directly. He prefers to drag out an example from his rich store of long experience to make his point. That's the way he started this time:

"You ever take note how much some people are like hawgs? You take a hawg; it don't matter how much food he's got in his own pen, if he sees a chance to break into somebody else's food-patch, that's what he's gonna do. And when he's got it cleaned out, he'll squeal to high heaven and act the most hurt critter in the world, when the farmer's around."

Cy stopped, filling his pipe. I waited for him to make his point.

"This farmer," Cy went on, "had him a patch of potatoes for his winter's eatin'. While he was in town one day, his hawgs got in the patch and started rootin' down the rows, cleaning' up as they went along.

"I drove by and, seein' the hawgs in the spud-patch, stopped. Just then the farmer drove up. He got out the car and leaned on the fence, cussin' some, but not takin' action. I got curious.

" 'Ain't you goin' to try an' stop 'em? Might still have some spuds.' "

" 'I don't figger to stop a hawg when he's feedin'," he says. " 'Might get hurt. Besides, they'll quit when they get to the end of the row.' "

Cy stopped and I thought about his story awhile. Then I said:

"Naturally they'd stop when there wasn't anything left to root for. But the farmer wouldn't have any potatoes left to eat, either. So I guess you're saying that was a pretty severe lesson to him: next summer, he'd have that patch fixed so the hogs couldn't get in. And that's what I meant—it's the one that gets hurt that's going to take action: fence in the human hogs, and see that they don't get out again."

Cy gave me a look of pity.

"Son," he drawled, "mebbe I didn't tell my story so good. A man that sets by and don't do nuthin' when his food is bein' took from him, he ain't likely to take action later. It's a sight easier just to blame the hawgs."

"Oh, I see that, all right," I said, "and I agree. A man that doesn't do anything except complain, really isn't doing anything. But certainly the hogs aren't going to do anything—" Cy interrupted me.

"It's plain to see you don't know hawgs. A hawg ain't got anybody to blame when he gets himself into trouble, an' he don't try. That's why, when things finally get messed up, it's the hawgs that's going to take action—in their own interests only!"

And he added:

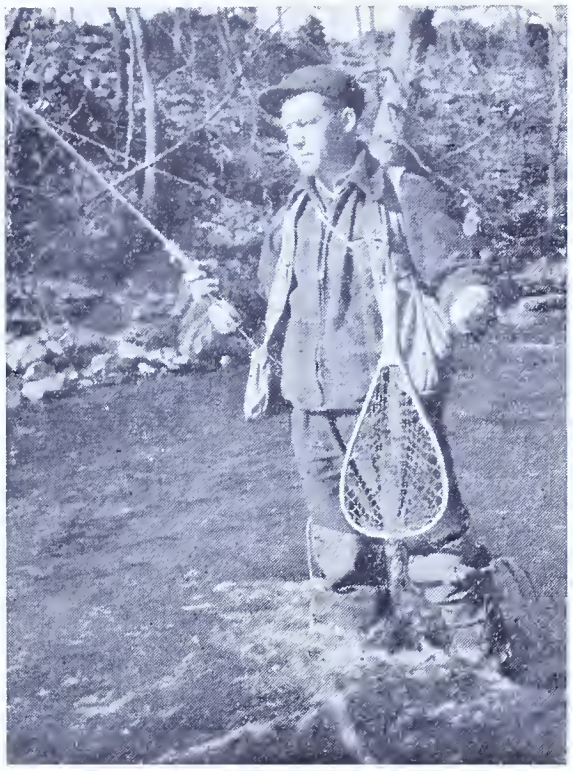
"A man that stands by and lets the hawgs run his farm has got no kick comin'. He just ain't a farmer."

And I knew that Cy wasn't talking just about a farmer: he meant me, you and everyone that permitted the exploiters to continue their rooting, while we stood by, "cussin' a little, but not takin' action."

W. O. N.—*Missouri Conservationist.*

Proper Trout Tackle

By Donald S. Shiner



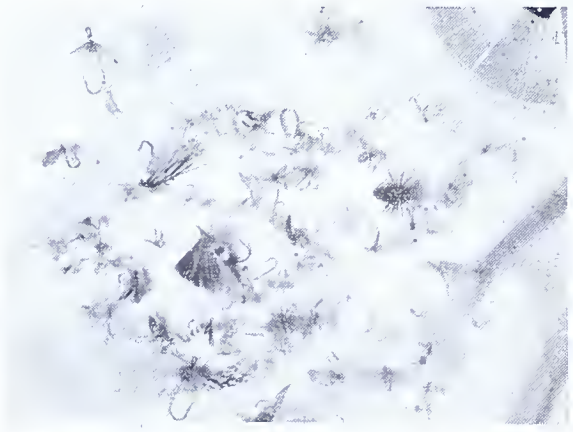
An early season angler wearing a warm jacket and a fishing vest to carry his tackle. Note the landing net is at the angler's immediate command.

MANY anglers seem to derive a great deal of enjoyment from a discussion of proper trout tackle. However, anyone who has followed the fishing game, for any length of time, generally has his own ideas concerning his needs and likes or dislikes for certain items of angling equipment available to the anglers of today.

This article is not directed to those sportsmen who have established their opinion on the necessary equipment but rather to those who are either beginning in this game or are interested in another angler's viewpoint in comparison to his own.

Discussions on tackle can be absorbing affairs and should not be condensed to anything short of a novel for our tackle of today is so complicated and varied. However, to those of you who desire a short summary about each necessary item used in this well loved sport called angling, this article may act as a guide as to what equipment goes into making a proper assortment.

Each item should be dealt with separately so a short discussion will follow on each necessary item.



Wet, dry, streamer flies, and spinners should be carried to meet the varied conditions found astream.

The Rod: Most anglers agree that the rod is a very important if not the most important accessory used in angling and reserves the most serious thought.

The years of use we expect from a rod, and the strain which we put it through, can only be found in a properly constructed rod. This means that the cheaper rods on the market will not serve you nearly as long nor as efficiently as a higher priced rod.

It is one piece of equipment which the angler should use care in selecting. While cheaper rods are easier on our modest pocketbooks, a more expensive rod will last much longer and is the economical one to buy in the long run.

Varied length rods can be had in the wide price range from $5.00 to $100.00 with a good medium around $18.00 to $25.00. Each rod in lengths from 7 feet to 9½ and 10 feet can be had in numerous actions. Light, medium and stiff actions are basically the different classes, however, each group or class can be broken or subdivided much farther.

As the above grouping points out, the rod as in the case of a light action is capable of handling small and light weight lures. Medium actions are general all around use, and the stiff actions are for longer casting distances and heavier lures.

When selecting a rod, keep in mind the type work you expect from it and check different rods in the price range of your choosing for its tight fitting ferrules, type reel seat and general over all construction.

Split bamboo rods are the most popular rods of today. While they need much more care than a steel rod and are much easier broken, the bamboo has proven itself over the years to be the best material for rods. However, there are numerous steel rods on the market today and anglers who own them say they are indeed fine tools. Whichever is your choice, select one that meets your type of angling. It is the piece of equipment which you will be using most and subjecting to the most rugged use.

Lines: Outside of the rod, the line is the next important item in the fisherman's tackle assortment.

In selecting a line, keep in mind, for proper performance, the line must fit your rod. Each rod weighing a different amount needs a different size line to bring out its action. As an example, you could not expect that a thin cord string tied to a broom stick would cause the stick to bend and become a spring nor would a thin whip stand up under the strain of a heavy rope. Therefore, a line must be found to fit each rod for best results.

A line can be selected for a rod by knowing the weight of the rod it is intended for. This problem of getting the proper line for your rod can be solved or eased by the following chart:

Rod's Length and Weight	*Line*
7½ to 8 feet—3 to 3½ oz.	H.F.H. or F
8 to 8½ feet—3¼ to 4 oz.	H.E.H. or E
8½ to 9 feet—4¼ to 5½ oz.	H.E.H. or E
9 to 9½ feet—5 to 6 oz.	H.D.H. or D

This table is not a cure-all, but will work out satisfactorily.

Tapered lines generally are available in torpedo tapers or a double taper, that is a line tapered at both ends. Torpedo tapers are a fine line, at the fly end—building up to an extremely heavily line some feet back and then leveling out in a smaller diameter. The double tapered lines have each end tapered to generally an "H" size line and then gradually built up to a heavier line in the middle.

While a tapered line is ideal for fly fishing, if the angler does not wish to spend so much money, a level line will work quite satisfactorily except that it is rather bulky where the leader is tied on.

Lines which can be secured today are made of silk or nylon. There are many advantages and disadvantages to each but both work equally well. Silk has a tendency to rot unless properly dried and cared for after each use and each season. It remains more pliable than nylon in cold water and weather.



The clear plastic fly box is the most popular fly container. The lures can be easily seen without opening the box.



The angler can economize on this part of the necessary equipment.

Nylon on the other hand will never rot from dampness but it is not as pliable as silk and has a tendency to stretch. However, either material makes excellent lines and it is up to the angler to decide which is the best for himself and his fishing conditions.

A good tapered line will cost from $6.00 to $15.00. Level lines are considerably cheaper and are the proper lines to use when bait fishing.

As in all angling equipment, a good line needs care and if it is given proper treatment will last many seasons.

Reels: The reels for trout fishing today are generally of two types—single action and automatic reels. Single action implies that the spool makes one revolution while the hand travels once around the reel.

Most fly anglers prefer the single action, however, both are ideal reels for line holders. The automatic greatly facilitates the ease of taking up slack line while playing a fish and the slack accumulated between long and short casts.

There are a wide assortment of reels on the market ranging in price from as little as 75¢ to the most expensive reel at $50.00. However, when viewing the importance of a reel in fly fishing, it is not a necessity to have an expensive reel, of course, it is nice to have a good reel to match the rest of the equipment, but the angler can economize on this piece of equipment.

The reel helps to balance the rod in the angler's hand and should be heavy enough to lift the tip upward slightly when holding the rod at the cork grip or slightly above. It is less tiring to have the equipment balanced this way.

Reels placed on the rod so that the narrow opening of the spool is in the direct line of casting is by far the best for fly fishing. This offers less chance of the line catching around the reel when casting.

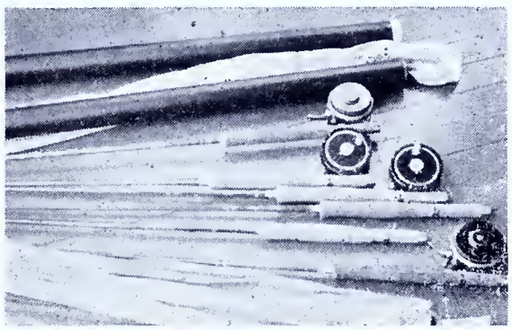
If the angler could secure two reels, it would be definitely an ideal set up. After using a line on a reel a number of times, it should be reversed or put on the other reel so that the opposite end can be used preventing a kinked line from being wound tightly on a reel. This doubles the life of every line.

The reel should have a capacity somewhat larger than the exact amount of line to be wound on at one time. Backing line can be used to build up the core of the reel; this will prevent the line from taking a curl when tightly wound on the reel, also affords greater ease when playing a fish, allowing him to run farther, etc.

A reel is a necessary item to the trout angler's equipment but select one that is suited to your fishing rather than purchasing a reel merely because it is an expensive one.

Leaders: Leaders can be found in three different classes: (1) tapered dry fly, (2) wet fly, (3) bait.

In dry fly fishing, the leader is tapered to a very fine diameter at the fly end. This of course, causes it to be somewhat invisible to the prospective fish and allows the fly to float with a minimum amount of drag. Leaders tapered to 2X, 3X, and 4X are the



The rod is the most important item of equipment. Choose one to fit your needs, one that will give years of service.

most popular sizes today, but keep in mind that for fast water fishing the leader can be shorter and heavier than when fishing clear and slow moving water. Lengths should be six feet, seven and one-half feet or nine feet, but can be somewhat shorter for fast water.

A table giving leader measurements in thousandths and their corresponding 'X' designation and pound test may be helpful in selecting leaders.

.013.....	8/5.....	5 pound
.011.....	0X.....	3½ pound
.010.....	1X.....	3 pound
.009.....	2X.....	2¼ pound
.008.....	3X.....	1¾ pound
.007.....	4X.....	1½ pound
.006.....	5X.....	1 pound
.005.....	6X.....	½ pound

Wet fly leaders can be level instead of tapered but should be of a fine diameter. If more than one wet fly is to be used at the same time, there are leaders which have "dropper" loops numbering from one to three.

For bait fishing, the level leader is best. As in dry and wet fly leaders, the length should be at least five or six feet. The leader is far less visible in the water than a line, hence, the fish are less suspicious. Under ordinary conditions the color of the leader does not matter. However, the clear glassy leader does reflect some light and has some affect on the natural appearance of the floating fly. Leaders today can be obtained in either nylon or silk-worm gut.

Silk-worm gut requires soaking in water before using so that they are not brittle. The late years have found nylon fast replacing the natural gut leaders and work equally well. It is as strong or slightly stronger than gut of the same diameter and its slight stretch sometimes aids in snapping loose the fly which has become fast to an under water object.

Leader Box: I must confess I have always had a great deal of trouble in finding the ideal leader box. There are a number of good containers on the market and many serving the purpose very well. However, I have found a square cardboard box of the type in which leaders are displayed in retail stores is the answer.

The one complaint concerning commercial leader boxes is their shape. They are thin, round containers made generally of plastic or metal. It is nearly impossible to carry any leaders in this shape box if the leaders are kept in their celophane envelopes so that the length and size designation can be seen. However, one could manage quite well if the leaders were taken from their envelopes, tagged according to their weight and length, then placed directly into the round box.

In the event that this method is desired, the commercial containers have felt pads which can be dampened and in the case of silk-worm gut leaders they can be kept damp for an entire day, and there is no need to stop fishing while a new leader is being soaked.

The popular nylon leaders do not require this treatment so the felt pads can be retained dry.

Whatever your choice may be, it

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The type of bait can used plays an important part in keeping bait alive and active.



The dredge queen at work near Cross Keys Basin near Reading.

Conservation Begins as Pollution Ends

By Ellen A. Dietrich

OUR sportsmen and women, while enjoying God's great out-of-doors, were the first among mortals to recognize pollution's grave menace to life, health, recreational and general prosperity in our State and Nation. For many years, therefore, sportsmen and women have looked forward to this day when conservation begins as pollution ends in the Keystone State.

To the thousands of men and women who will read this communication—to conservationists, above all others, seeing is believing.

And we've seen it with our eyes, the most heartening and definite anti-pollution progress since Pennsylvania's clean streams movement began on the filthy Schuylkill, the river along which approximately one-third of the population of the Keystone State resides and the first river on Governor Duff's gigantic cleanup program—the "testing ground," therefore, for clean streams throughout the Commonwealth.

"At last the dirt is really flying on the Schuylkill," admiringly remarked Judge Grover C. Ladner, our pollution-fighting Chairman of the Pennsylvania Conservation Committee and President of the Schuylkill River Valley Restoration Association, as he accompanied our Governor and members of the Pennsylvania Legislature on a Schuylkill inspection trip—conducted recently by the Department of Forests and Waters from Reading up-stream to Kernsville—and found there a series of huge impounding basins that have been constructed within the past few months under the direction of that dynamic Admiral Milo F. Draemel (Secretary of the Dept. of Forests and Waters) along the Schuylkill dams and —believe it or not—one of four powerful dredges already at work, sending approximately 250 tons of coal silt per hour up to the Cross Keys impounding basin from the dam below! A sight that not so long ago even the most optimistic among us never expected we'd live to see.

Remember our thoughts, expressed and otherwise? "Surely our streams should be cleaned. Surely our streams could be cleaned, just as many filthy European streams have been cleaned. And surely, too, we'd all benefit by their being so," agreed the general public of the Keystone State. "But if we believe anything will be done by our legislators within our lifetime to clean our streams, we're not conservationists, for we're wasting precious time on idle dreams. Why, industry wouldn't permit it," was the discouraging general opinion of the general public of years just past. Remember? Of course, we do.

Heartening it was, therefore, to hear our Governor say, while inspecting the disappearing Schuylkill filth, that the clean streams movement throughout the State is daily receiving greater impetus not only through vigorous effort on the part of the Pennsylvania Sanitary Water Board, the Department of Health and the Pennsylvania Department of Forests and Waters, but, also, through cooperation (instead of "bucking," as in years gone by) from the vast majority of our industries—the very industries to which Pennsylvania already owes not only her "bread and butter," but her high place among the states of these United States in many phases of the American way of life, as well. Yes, we cannot pass by this fact lightly; for it is one of the most important factors in Pennsylvania's clean streams movement today and one which, at first glance, seemed almost incredible. Industry is no longer against us—thanks to our Governor and our legislators. Industry is with us in our clean streams movement—toward health and recreation for the general public and in the interests of industry itself.

Further, the Governor added, most of our cities and towns (though not all, unfortunately) are becoming more and more desirous of meeting their obligation to install adequate waste disposal facilities and thereby end their



Sen. John B. Snowden, Governor James H. Duff and Forest and Waters Secretary M. F. Draemel inspecting the progess of the Kernsville Dam on the Schuylkill River Near Hamburg.



Discharge from dredge.

thy practice of dumping disease-den sewage into the very streams om which the people of Pennsylvania ust secure their drinking water—nd the State Department of Justice ll take care of the others, the selfish es, he said.

Meanwhile, our Governor concluded -and we recall he said this before—if te general public continues its united front of loyal support, the task of cleaning our streams will be successfully accomplished!

Thus, thanks to each and every one of you who has helped and who will continue to help along the way, we actually saw with our eyes the other day on the Schuylkill positive proof that Conservation really begins as pollution ends—in Pennsylvania.



New treatment at paper mill along Brandywine Creek.

Calif. Sportsmen Fight Pollution

The Associated Sportsmen of California are organizing their forces for a fight to the finish to clean up California's streams and coastal waters, according to the Wildlife Management Institute. Seeking new and forceful legislation to curb flagrant abuses of the state's waters by industries and municipalities, the sportsmen have been urging legislators to draw up an act compelling communities, incorporated or otherwise, to process raw sewage. The same act would contain clauses charging industries to take care of any waste which might enter, directly or indirectly, into state waters.

The Division of Fish and Game has been directed to "take every possible step under existing laws" to wipe out pollution, and Executive Officer E. L. McCauley has ordered "arrests if necessary" to halt contamination of waters where fish and wildlife are endangered.

The Associated Sportsmen pointed out that pollution is not only a death sentence for fish but is a great menace to the health and welfare of California citizens, especially of children. Without vigorous, unified action by the voters few industries and municipalities will undertake the expense of cleaning up waters in which may be found the bacteria and viruses of many diseases, including that of polio.

Salt Water Angling Survey

Salt water angling has long been a favorite sport with coastal sportsmen, but according to a recent survey made by *Outdoorsman* the coastal boys no longer can claim the sport to themselves.

The survey, projected over 300,000 active sportsmen, showed 69.3%, or 207,900, included salt water angling in their fishing sport. Naturally, the largest percentages were found in the coast states, yet a comparatively high number of "inland" fishermen annually find time to go to the Atlantic, Pacific or Gulf for some angling.

The survey also disclosed that summer months are the most popular with salt water anglers. August was top month with 16.3% of those covered by the survey. July ranked next with 15.51%; June was third with 14.17%, and September fourth with 13.17%. February was last with .65%.

The Atlantic Seaboard is most popular with a total of 39.74%, followed by the Gulf (including Florida) with 22.35%, the Pacific Coast with 21.12% and New England with 16.76%.

Maryland was top state in the Atlantic Seaboard group with 8.07%; North Carolina was runnerup with 7.45% and New Jersey third with 6.21%.

On the Gulf Florida ranked No. 1 with 12.42% and Texas was second with 8.89%. California drew 9.94% of the Pacific Coast salt water fishermen, with Oregon getting 6.21% and Washington 4.97%.

Up in New England, Massachusetts was the front runner with 8.07%, followed by Rhode Island with 4.97%.

Trolling was voted the most popular fishing method, with 27.3%, favoring it. But salt water fishing with fresh water tackle (bait casting) was a close runnerup with 25.6%. Surf casting drew 22.4% of the votes, and Pier fishing 22.1%.



The author stands knee deep in the Snake River to do battle.

Pennsylvania Angler's Vacation

By Gene Craighead

LEAVING the Harrisburg Pennsylvania airport at 5:30 P. M., August 27, I landed the next morning at 9:15 at Jackson, Wyoming, 2,300 miles away. Flying over the Rockies at an elevation of 12,000 feet one could see to the right, Jackson Hole and on the left the Teton Mountains, which rise to an elevation of 13,766 feet all of which was a breath-taking picture. The pilot flew along the Teton range for miles and one could almost reach out and touch these massive peaks of rocks, most of which were snow capped even in the latter part of August. Jackson is about eight miles from the airport and Moose about four. It was at the latter place that I was given the privilege of fishing for the next seven days one of the finest waters in the United States, the Snake River. This fishing paradise for the most part is not too accessible by road and as there are no railroads into Jackson Hole, the time consumed getting there from any place in the east runs into days unless one flies into the territory.

Moose is about 6,500 feet elevation and just about two miles from the foot of the Tetons, with the Snake River running through its front door, just one hundred feet away. At this point the river is about 300 feet wide and the tremendous flow of water is concentrated in this one narrow neck. The river flows for short distances, then it splits up into from two to five branches all of which have about equal quantities of water, one or more of these joining together again at different points and again breaking away. This goes on indefinitely. Excellent fishing is found in each one of these branches. Looking down upon this stream from the air you could see what appeared to be many rivers but what one actually saw was just the typical divisions of the Snake River which takes place through the entire Jackson Hole area. The Snake River from Jackson lake through Idaho to where it pours its volume of water into the Columbia River is about 1,200 miles distance. Many small streams or tributaries are continually pouring into the Snake River, much of their water coming from the melting glaciers and springs.

Most of the springs flow but a short distance before beavers start their systematic work of making dams and homes and in some cases these series of dams cover a distance from one to two miles. These dams have eastern brook trout, native cutthroats and an occasional rainbow. Many of these dams will have several hundred trout ranging from 12 to 18 inches. A few of these dams are noted for the large brook trout some weighing as much as pounds. Food is very abundant and fish grow rapidly and to a very large size especially where their number are limited to fifty to a hundred trout to the dam. Below each dam there are thousands of small trout but never did I see any small trout in the dam where the larger trout had taken over. The small feeder streams abounded in rainbows and cutthroats with the latter predominating.

The Grand Teton National Park has an area of 96,000 acres and includes five large lakes, all of which have above average sized trout. Many smaller bodies of water, glaciers and snowfields, and extensive forests of lodgepole pine, cottonwoods, white bark pine, Engleman spruce and fir. The cottonwood, which grows rapidly and to a large size, looked as if it constituted about 90% of the beaver food, and the only tree upon which I saw the beavers feeding. The eastern



The majestic Teton Mountains in the background lend setting to a fair anglerette who caught them right along with the boys.

rook trout are the fattest, broadest nd most highly colored that I have ver seen. I believe the sunlight and he abundance of food account for this. he mornings in the latter part of ugust were chilly and clear but by n o'clock the temperature would each 85° where it remained for the st of the day. The air is very dry nd clear and insects are very abund-nt. The beaver ponds containing the rookies have a tremendous amount f vegetation and quite often when shing you could see a big bull moose eeding. When you approach one of iese beaver ponds you are presented ith a picture that one seldom sees. he surface of the pond is alive with eeding trout and it is not unusual to ee hundreds of brookies averaging 12-3 inches. The State of Wyoming is oing a marvelous piece of work in stablishing our eastern brook trout nd fortunately they seem to thrive ell in that environment. The water very clear and cold and these ponds verage 2 to 10 feet in depth.

It was because of my two nephews nd my son Bill, who was acting as ssistant guide for Bob Carmichael, iat I was persuaded to make the trip nd try my fishing luck in the Jackson ole area. By 10:15 the first morning was fishing with Bill and within two ours had taken my first limit which ot only pleased Bill but brought fav-rable comment from Bob.

All fish must be kept regardless of ze, the limit being twelve in the ver. Jackson Lake, Leigh Lake and enny Lake all have a smaller limit r each days catch. The first trout iat I fished over was a large one and as doing his best to take every insect iat came within his sight. After four asts with a No. 16 dry quill gordon, I hooked him but lost him immediately for I had lifted the tip of the rod too high. Four days later I returned to the same spot and on the second cast hooked into a fine fish and twenty minutes later netted this same cutthroat and recovered my fly and leader that I had given up for lost. This was a gorgeously colored fish and very well proportioned. The cutthroat or native black spotted are of a greenish tint on the back, the body being moderately elongate or compressed. Spots mostly black, dorsal, caudal and adipose fins covered with small spots; the throat a blood red, looking as if it had been smeared with paint and the belly deep yellow to orange and rarely spotted.



Fishing for trout in one of a series of beaver dams.

The Snake River is not fishable in all places due to the tremendous volume of water and its swiftness. Occasionally spots are found where you can wade above the knees but at that depth the average current sweeps you off your feet. If an eddy or pocket is found it is not unusual to take a day's limit without moving further. One can readily hook fish along the shore in these fast stretches but the chance of landing it is quite slim. The standard leader is a nine foot tapered to a 3x and was found to be the most satisfactory by Bob Carmichael, the professional and well known guide at Moose. He has an excellent tackle shop and handles the finest equipment on the market where one can be completely outfitted for any kind of fishing in that locality. He is a marvelous person to meet and knows all the patterns on the river and the hatches of insects that take place at different times during the fishing season.

There were several large grey drakes or Mayflies on the river and a small grey drake about the size of a No. 18 was found on all the ponds. This could be matched with a No. 18 blue quill and give marvelous results. The most abundant insect in that entire region was a small reddish black flying ant that swarmed in large numbers on the banks of the river or directly over the water, and would rise and drop in great masses. Many mornings the surface of the water would carry numbers of these ants and the trout that were caught would be gorged with them. For cutthroats and brook trout in the ponds and smaller tributaries like Spring Creek, I used No. 16 spiders, preferably dark, and No. 18 blue quill. When there was a slight

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Penna's New Chief Fish Warden



At a regular meeting of the Pennsylvania Board of Fish Commissioners held on Thursday, January 20, 1949, Mr. William W. Britton a regular fish warden for Franklin County was elevated to the newly created position of Chief Fish Warden for the Commonwealth.

In his new position Mr. Britton will head the law enforcement bureau of the Pennsylvania Fish Commission, plans and policies of which will serve to improve and coordinate the Commission's conservation program in the state. Mr. Britton is 46 years of age with a wide experience in the conservation field extending over some 17 years. THE PENNSYLVANIA ANGLER joins his many friends in paying him this salute of congratulations.



THE BROWN TROUT

Heddon Fish Flashes

Edited by

LOU S. CAINE

THE brown trout is a moody and rugged customer, feeding whenever the mood strikes him. However, its spectacular tactics and powerful surges make it worth whatever patience is required for its capture.

The brown trout grows to sizable proportions because of its instinctive ability to elude anglers and it is this characteristic, plus the ability to adapt itself to many different types of water, which enables the brown trout to hold its own in heavily fished streams.

Where the rainbow and brook trout cannot exist, these same waters will prove entirely satisfactory to the hardy brown trout and because of his versatility it has become widely transplanted and extremely popular with both live and artificial bait users.

The brown trout is sometimes called Brownie, English Brown Trout, European Brown Trout, German Brown Trout, Loch Leven Trout, Von Behr Trout.

The brown trout's color varies greatly with locality. Dark brown on upper part of body blending into a lighter brown on the sides. Heavily marked on the back with black spots, and red and black spots on the sides. Has larger scales than brook trout. In older fish the under jaw has a tendency to become extended and overshoots the upper jaw, giving it the salmon characteristic of a hooked jaw.

Brown trout can live in warmer waters than most trout and even when the temperature of the water reaches 80° they apparently suffer no ill effects. The caution of the brown trout is developed to a greater degree than it is with most trouts and it is a habitual nocturnal feeder.

The brown trout is not one of America's native trout, but was introduced in 1883 from Europe, where it had been a favorite for many years. The original shipment of eggs was from a Von Behr of the German Fisheries Society, and for some time this trout was known as the Von Behr Trout or the German Trout. Later, shipments from Scotland of a sub species of brown trout known as Loch Leven Trout were transplanted in the West.

These have interbred with those of the first transplanting, thereby confusing the issue of the true brown trout. Due to the ease with which brown trout can be transplanted, their distribution is now practically worldwide. In this country they are now found in every state except the southernmost, and also in Canada.

The brown trout prefers larger waters than the brook trout, such as streams, rivers and lakes, and waters where there are submerged obstructions and overhanging banks. Browns frequent the lower ends of pools and like to lie beside or just ahead of rocks that protrude from the current.

The world's record brown trout, caught on rod and reel, was taken by W. Muri at Loch Awe, Scotland, in the year 1866. It weighed 39½ pounds. As with most species, the rule of, "the larger the water, the larger the fish" applies, for in small streams the average size will be ½ to 1 pound, while in larger streams and rivers it will reach 1 to 4 pounds, and 7 to 8 pounders are not rare.

When taken from cleaner, faster waters and properly prepared the brown trout is excellent eating. The over-all average from all waters can be termed "fair."

Brown trout prefer flies and insects to a greater extent than most trout but as they grow in size this diet is augmented with snails, crawfish, worms and minnows.

Wet and dry flies, streamer flies spinner and fly combinations, floating bass bugs and spinning lures. Larger brown trout will also strike the smaller midget-size baitcasting lures such as Midget-Digit and Midget River Runts.

Although both wet and dry flies are favorites of fly fishermen, the brown trout is undoubtedly taken in greater numbers by live bait fishermen using casting rods, fly rods and cane poles.

When fly fishing streams or other waters where only the smaller size brown trout will be found, a light weight fly rod made of split, tempered bamboo in the light trout action is preferred. It should be built on a 1¾ ferrule and be 8 or 8½ feet in length light trout action. Such a rod will weigh 5 ounces or less and will balance up with an HDH tapered fly line or a E level line.

For larger brown trout, such as those that inhabit rivers and lakes, a heavier and longer rod is suitable, such as a split, tempered bamboo rod 9 feet in length and built on a 2½ ferrule in Bass-Trout action. This rod will handle an HCH tapered line or a D level line in excellent shape.

In all rods of this type, "dry-fly" action is to be preferred, for the brown trout is a consistent surface feeder and as a result, dry flies can be used most successfully. For big trout, floating bass bugs are most effective. While the brown trout is primarily a surface feeder, it will also take streamer flies and spinners readily, especially when streams are "on the rise."

Each year, more and more brown trout are taken with baitcasting rods and lures, and the popularity of this type of fishing is growing by leaps and bounds.

As small midget-size lures like the Midget-Digit and Midget River Runts are most effective, it is necessary to have a rod with extra light action. It should be made of either split, tempered bamboo, or hollow, tubular steel

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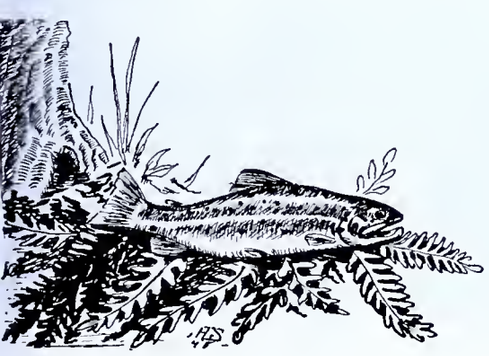
OPEN SEASON

by Albert G. Shimmel

THERE is an evasive, magical quality of unreality when trout season eally arrives. To be among those pre-ent is the mark of the resuming of all he strange qualities of character that ere laid aside eight and a half months go when the bamboo was retired from ctive service and the line taken from he reel and hung in loose coils from he deer antlers on the den wall. Now s the beginning of the test for the new ures and theories concocted during the ong months of waiting and the practice f testing again the proven lures of past easons.

When the moment arrives at last and ou are standing on the bank of your avorite pool there's a strange lethargy omes over you, a hesitancy of step-ing into the dark water where ice oated willow twigs dabble. Finally ou make the start and feel again the ug of water at your booted calves. The irst exploratory cast goes forth, send-ng the lure to search out the curling ockets to the rear of a sunken boul-er. There's a flash and as you lift he rod the telegraphic tugs of a fish. The resistance is short and much less harp than it will be later when the hill has left the water. He comes in lowly and as you carefully shake the olds of the net clear there comes a it of a surface flurry before you can nclose him in the waiting meshes. What thrill can compare to the first rout of the season? When he is finally ucked away in the creel with a cover-ng of hemlock twigs the rest of the lay really isn't a matter for anxiety. The Red Gods have smiled and the day s a success come little or much. Sud-denly comes the realization that you are cold and a hasty departure to the and is in order. Here is the chance o study the methods of early season anglers while restoring circulation to hilled extremities.

The first to pass in review could serve as a model for a picture of an English Country Squire, short, stout, sandy hair, blue eyes and ruddy cheeks. His hunting coat reminding one in the way it fits of the skirted fishing coats of Walton's time. There's a smile of satisfaction that would do well for a Christmas portrait of Santa Claus. At our query he lifts the lid of his creel to show a brace of fat browns and a rainbow. At our invitation he comes ashore to share a cigarette and we have an opportunity to study the swiveled rig with its split shot to take the spinning minnow down to where the big ones lie. When he leaves us and again enters the stream we notice the skill with which he handles the long rod and heavy leader. Here is a true lover of the trout and the sport of the cold waters.



The next angler to pass our post is a lean, long armed youth using a garden hackle with a tiny, gold, willow leaf, spinner placed a few inches above. He seems impervious to cold and a suspicious damp ring above his boot tops shows that the enthusiasm of his years has led him somewhat beyond his depth. He greets us with the ancient anglers hail, "What luck?" and proudly shows four brilliant brookies of nine inches. They are the prize of early angling.

The sun is warming the air again as we enter the stream and send our own lure a streamer weighted with a single split shot to search the pocket water near the tail of a stiff run. The little streamer patterned after the black nosed dace does business and we have the pleasure of landing four more plump brooks of which all but one are returned to the stream. Noon comes and with it the creature comforts of food, a warm place in the sun and relaxation.

As we rest, my eyes wander restlessly over the now sunlit water of the Spring Pool. There is a movement on the surface and there rides a dark fly, its vertical wings almost lead color. Carefully it lifts itself to a haven in the hemlock boughs.

When we return to the stream I remove the lead weighted streamer fly and replace it with a cast consisting of two March Browns and a Rock Worm. Carefully I work the first pool from the top and as the flies drift into the smooth depths where the current flattens before going into the pool below, there is a good swirl and I am fast to a good brown of a pound in weight. He fights sturdily but finally gives in to the resistant pressure of the bamboo and I tuck him in with the others. The next pool yields three strikes but only one trout hooked. This fishing a drift down stream is not conducive of a high percentage of hooked fish except in brown trout waters. I doubt that a brown misses many flies that he really tries for.

After this pool I climb the bank and move up stream in search of Chet and Jack my fishing pals. I find Chet first but he is skeptical of my rig and it takes a demonstration in which a brookie plays the leading role before he too changes to the wets. Jack is soon found and he too is convinced that the trout will take near the surface. Then we separate again to sharpen our hand in actual practice of fooling the fish.

As I work a willow bordered narrows in the stream a male Redstart radiant in his ebony and flame plumage keeps me company and hunts his dinner at the same time. Suddenly he flashes across almost in front of my face, followed by a male sharp shinned hawk. He reaches the haven of a clump of frost thickened hemlocks just ahead of the yellow talons. There is a small crash of brittle twigs, a few drifting feathers and the frustrated hawk darts away. Down stream a Kingfisher rattles his harsh laughter and another drama of the wood with its near tragedy is over. I wouldn't have missed the show for all the trout strikes of the day. The picture of that hurtling bit of flame with its trail of deadly smoke is stored in memories creel.

I worked slowly down stream waiting for my companions who have been fishing above. Hugging the bank and stooping just a little to avoid an overhanging branch I ship water over my right boot top. The realization comes only with the cold trickle of icy water where tradition says the fisherman is always wet, but just a bit lower. Finding secure footing I hook my rod under my arm and charge my pipe. Just as the match flares I get another strike. It never misses, turn your attention for just one second and the trout take advantage. A hail from above and Chet works his way down to me. I direct him to the very place where the branch marks the spot and watch the look of pained surprise as he also joins the "Royal Order of Wet Leg."

The chill is coming back to the air and the trout work deeper and deeper. We fish the final stretch back to the car sometimes arm in arm over the

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Photography for the Fisherman

By Dick Fortney



Have your angler subject hold a fish like this, so a comparison of its length with part of his body will indicate its size.

HEAVEN knows, the average angler carries enough gadgets on his person right now. What with creel, landing net, flashlight, fly boxes, bait cans, and other paraphernalia, it seems downright cruel to suggest anything more.

Yet that is precisely what we intend to do.

We'd like to see the average angler get more interested in photography—for his own benefit.

Fishing memories are delightful ones, but they also are fleeting ones unless somehow converted into a permanent record. A diary does this, but in a very limited manner. It records dates and places and names—but it cannot capture in words the beauties of nature, the comradeship of good friends, and the beauty of a fine fish.

A photograph can do all that.

And a photograph is easily and cheaply made.

The industry reports that some 30,000,000 Americans own and use cameras. These cameras range all the way from simple box affairs that cost only a couple of dollars to fine precision instruments costing a couple hundred dollars. They all take pictures, within their own limitations.

But the vast majority of cameras in use today are of the inexpensive variety. And a man who studies and understands a camera of this type is able to take pictures that compare favorably with those produced by costly cameras. Many pictures taken with box cameras have achieved a quality that has earned them places in salon exhibits.

Manufacturers today turn out film with a latitude undreamed of a generation ago. For the amateur, that means he can take pictures with light conditions considerably less than perfect. Further, cameras are being manufactured with fixed focus lenses and predetermined shutter speeds that make the taking of a picture the simple operation of aiming the camera and snapping the shutter.

It's all done so even the most inexperienced person can make photographs which are acceptable and pleasing.

Before going deeper into the matter of equipment, however, let us consider just what makes a good fishing picture. As you will see, this will prove a clew to the kind of camera you will wish to use.

Most obvious picture possibility is a fishing stream or lake. Here are the scenes with which the angler is familiar and where he has experienced all the pleasures of his sport.

The angler will desire some photographs which show the stream in panorama—for example, a shot that brings out mountains in the background or blooming fields along its course. But the fishing photographer also will be on the alert for more intimate scenes—perhaps of a pretty waterfall, a small, rock-studded pool, or a pool over which a stately old tree casts its shade.

Just a hint here: The stream picture always is better if there is life in it. If it is of a waterfall, have someone admiring its beauty. If it is of a pool, have a fisherman standing in the water. The human angle should not predominate in this kind of a photograph. But it does add life and realism to the picture.

Fishing companions always are excellent picture subjects.

You'll treasure for a long time to come that intimate shot of a friend pulling on his boots, rigging up his rod, or munching a sandwich. Or you can catch him in the act of casting a fly—or, if you are lucky, snap his picture when he is battling a fish.

Sometimes you will want more than one person in a picture. There may be four or five in the party, and the record should include them all.

But whether the picture is of a single individual, or of a group, try to make a picture that is natural. Don't ask your subjects to pose for the camera. Rather, await an opportunity to click the shutter when they are doing interesting things and when they are unaware of your intention.

Pictures of fish also add to the



A human being in the picture always makes an outdoor scene more attractive and interesting.



This Brownie Flash Six-20 is typical of the modern inexpensive flash cameras. This one uses 620 films and No. 11 flash bulbs. There are no intricate shutter speeds and lens openings to worry the amateur.

angler's collection. But they probably are the most difficult of all to take.

With the average camera, it's virtually impossible to get good pictures of small fish. That does not make much difference, however. What sense is there, anyway, in taking pictures of small fish?

A really big fish can be shown in a picture taken with a camera costing a modest price. The trick of getting an effective photograph is to somehow work in a size indicator.

The easiest way, of course, is to stretch the fish out beside a yardstick. But that is a pretty weak and corny idea. It's too obvious.

A better way, among others, is to put the creel on the grass, open the lid, and place the fish across the lid. Or the butt section of the rod may be shown beside the fish. I saw an effective picture one time that had an unusual background. It was a battered old fishing hat, with flies decorating the band and a license button pinned to the front. The picture certainly got atmosphere from the hat. What is more to the point, anyone looking at it could get a good idea of the size of the fish by comparing it with the width of the hat.

If an angler holds a fish while it is photographed, there is one sure way to indicate its size. Let the man hold the fish by its jaw in a perpendicular position, with his hand level with his shoulder. The tail of the fish will approach his belt, and thus emphasize its length. Or the angler may hold the fish in his hands, in a horizontal position, across his stomach. Thus anyone looking at the picture can compare the length of the fish with the width of a man's body.

Picture backgrounds always must be given careful attention.

In stream pictures, beware of attempting to photograph areas where there are deep shadows. In taking pictures of individuals pose them carefully, so that the finished product does not show a tree limb apparently growing out of the tops of their heads. The sky is a most excellent background. It contains no confusing details. In taking pictures of fish, be sure to arrange the scene so that the details of the fish will be sharp. Fish usually are light-colored in pictures, so a white shirt makes a poor background. Green grass, on the other hand, forms a pleasing setting.

One more rule might be added. Don't try to get too much into a single picture. It's better to make two pictures with three men in each one than a single picture in which six men appear.

As an introduction to the topic of picture subjects it was pointed out that the kind of pictures an angler wishes to take are a clue to the type of camera he will desire to use. This means, simply, that there are cameras made for panoramic shots and cameras for close-up work. There also are cameras which will catch good, clear pictures of persons and things which are in motion, and there are cameras which require the subject to be motionless. And, finally, there are cameras that will take pictures only under good light conditions, sunlight preferred, and there are cameras that take pictures when light conditions are poor or bad —and cameras that take pictures when there is no light at all.

Advising a sportsman what kind of camera to buy is as difficult as suggesting what kind of a rod or reel is best. It just isn't done in the best outdoors magazines.

I'll get around that problem neatly by describing my own cameras and telling of their limitations and their capacities. I started from scratch and sort of grew into fishing photography. I hope my own experience will suggest what any reader also can do.

The first camera was a gift, a handy folding job using size 620 films, which produce pictures 2¼ by 3¼ inches in size. For snapshots it has a fixed shutter speed of "I" which is about 1/35th of a second. It has lens openings ranging from 12.5 to 32. This camera is limited in its picture-taking ability. After considerable experimenting, I settled on a lens opening of 12.5 in good sunlight.

The camera is excellent for taking pictures in which a lot of territory is to be covered, scenes of some area in the outdoors, or groups of five or six persons, for example.

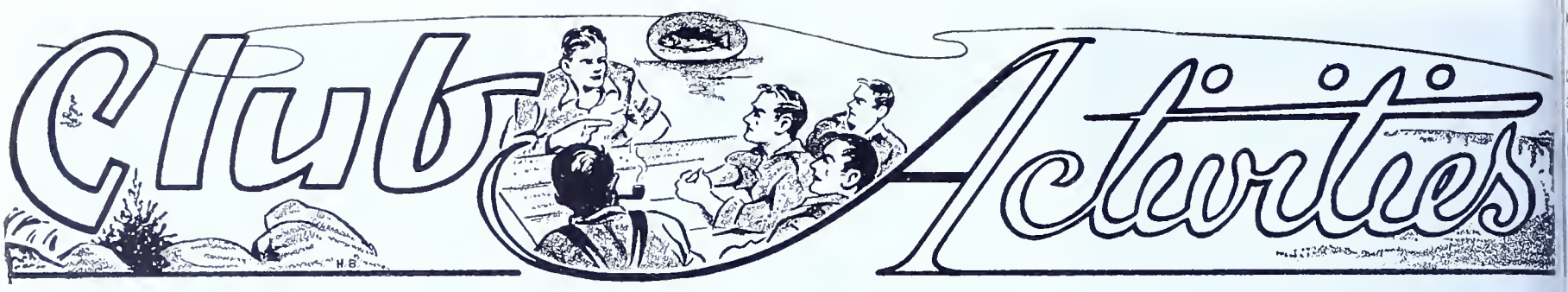
The retail price of the camera is around $20.

The limitations of this first camera led directly to the second. This one is a 35 millimeter camera, with a shutter speed up to 150th of a second and

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Here is a compact easy to use camera that is ideal for the fisherman to carry and use. It is the Kodak Tourist, with a 4.5 lens and making pictures 2¼ by 3¼ inches in size.



Pocono Mountains Sportsmen's Assn.

Jack Anderson reports there are 42 members in the Junior Organization at present with more joining all the time. The boys take great interest in their club and are very anxious to make it a complete success. Jack stated that he has several interesting programs for the boys in the meetings to come and invited the Senior members to attend the meetings.

Little Pine Creek H. & F. Assn.

Members of the association have elected their new officers for the year 1949. John R. Welsh, of Waterville, was elected president. Other officers include: Joseph Berry, of Salladasburg, vice president; Maj. Fred L. Bowles, of English Center, treasurer, and William Suders, of English Center, secretary.

Hunters & Anglers Club of Centre Co.

Frank Sasserman, of Bellfonte, has been elected president of the club for 1949. Other officers are: James Funk, vice president; Leslie Thomas, treasurer, and L. Orvis Harvey, secretary. All are from Bellefonte. Directors are Charles S. Smith, Elmer Garbrick, Harry N. Meyer, Charles Hipple, and Edward Osmer, also of Bellefonte.

A Fine Job—Elmer

T'was a grand affair that banquet held in the Cathedral at New Castle on Saturday Evening, January 15 when more than 1300 sportsmen paid tribute to Elmer E. Brown, popular and hard hitting sportsmen's leader of that city. One must be on the ball to win the acclaim such as paid to "Brownie" as we like to know him. THE PENNSYLVANIA ANGLER hastens to join the throng in adding its salute to Elmer E. Brown.

Delaware Co. Field & Stream Assn.

The Ways and Means Committee and Executive Committee have been making plans for the Annual Field Day to be held in May. They have ordered books for donations toward a 1949 Dodge Sedan, and some lucky donor will receive a nice, new car for only 25c. The proceeds from the profits of these books will be used to improve the present club site and to increase the number of fish in the local streams and to help supply additional game on the open hunting areas within the County.



Winners in the Deerfoot Rod & Gun Club 1948 Big Fish Contest. Left to Right: Contest Judge, Dan Filo, Rex Sauter, winner large mouth division, Jack Yousko, winner walleye division, J. P. Yousko, winner small mouth division, Frank Horn, contest judge and Edward B. Schick, President of the club and runner-up in the small mouth bass division. Harris Breth another judge was not present when the photo was taken.

Columbia County Sportsmen's Assn. Holds Interesting Meeting

Representatives of various Columbia County Sportsmen's Clubs were honored the evening of January 27th with the presence of Mr. Paul Bittenbender of the Fish Commission and Mr. Wolmsdorf, Fish Warden of Luzerne County.

Many of the prominent angling problems were discussed. These included improvements in Farmer-Sportsmen relations; methods of stocking (with no publicity of date) and reasons for the scarcity of game fish in the streams of this vicinity.

Mr. Bittenbender, introduced by Mr. Wilbur Stevens, President of the Keystone Sportsmen's Association, pointed out that stream improvement plays an important part more so than mere stocking of fish, in the angling potentialities of any stream. Refraining from digging among the rocks and gravel of the stream, thereby destroying millions of insect larva and eggs, cause the stream to support fewer fish than it could if this practice was sharply curtailed.

Various suggestions were offered for improving the ill feeling now existing between Farmer-Sportsman groups. Although real sportsmen contribute little, if any, toward the list of mistreatments to the land owners, a movement is on foot since this meeting to prevent hordes of anglers concentrating at any one locality in this county.

Mr. Bittenbender mentioned possible posters that could be erected along the streams to remind the angling fraternities that the land they are using while fishing is to be treated courteously and with respect for the owner.

Burgess Clup of Berwick began the program with a narration concerning the Almanac and its relations to the angler's activities. Mr. Paul Learn, secretary of the Keystone Sportsmen's Association, was the speaker for the Club representatives and presented the problems in question to Mr Bittenbender.

The clubs represented were: The Beagle Club of Berwick, West End Hunting & Fishing Club of Berwick, The North Berwick Hunting & Fishing Club, The Farmer-Sportsman Club of Berwick, Berwick Rod and Gun Club, Rifle Club of Nescopeck, Little Fishing Creek Sportsmen's Club of Millville, Orangeville Sportsmen's Club West Berwick Hunting & Fishing Club and the Tri-County Sportsmen's Club of Mountaintop.

Western Clinton Co. Sportsmen's Assn.

The association expects to sponsor a boy at the Junior Conservation School at State College this summer. Just what means will be used to select the boy has not been decided as yet.

Keystone Fish & Game Protective Assn.

This Association of Shamokin is beginning to plan for their spring activities. The annual banquet will be held in April. In the meantime the membership drive is getting under way.

Clinton County Federation

The federation has elected the following officers for the new year: President, H. M. B. Weicksel, of Renovo; vice presidents, Earl F. Ritter, of Lock Haven, and G. W. Hancock, of Loganton; and secretary-treasurer, E. H. Geisewite, of Loganton.

State-Centre Game, Fish & Forestry Assn.

The stocking of 1030 legal-size trout highlighted outdoor activities of the Association recently, unit Secretary Russell Lucas announced.

Members of the association received word from the Federal Fish Hatchery at Lamarr that an order placed last March was available at this time.

A truck was secured through the courtesy of Lauderbach-Griest and several dozen cans from the Purity Milk Corp. to stock the trout which were nine inches in length. 540 of the trout were rainbows while the other 490 were brooks.

Harrisburg Club Announces Contest Winners



The winners. Front row, L. to R.: Wm. P. Durborow, Robt. Rowe, Dr. H. A. Brown representing J. F. Eutzy, J. W. Kuntz, Mrs. Thelma Crum, A. S. Krensky and R. C. Minnich. Back row, L. to R.: Harry Warden, E. A. Keller, Dennis C. Devine, H. E. Steffen represented by his son, Albert Garisto, H. K. McNear and Claud M. Bretz.

The Harrisburg Hunters and Anglers Association announced the names of the winners in their 11th. Annual Big Fish Contest at their last regular meeting held February 1st. They were as follows:

Brook Trout—Roger N. Good, 16¼ inches long, taken in Yellow Breeches Creek.

Brown Trout—Jacob W. Kuntz, 28¾ inches, Big Spring.

Rainbow Trout—Robert Rowe, 21¾ inches, Yellow Breeches Creek.

Small mouth Bass—Richard C. Minnich, 23½ inches, Susquehanna River near Marysville.

Walleyed Pike—Joseph F. Eutzy, 28½ inches, Susquehanna River near New Cumberland.

Pickerel—Andrew S. Krensky, 21 inches, Susquehanna River.

Rock Bass—Tie between William P. Durborow, 10 inches, Yellow Breeches, and Robert Gardner, 10 inches, Susquehanna River.

Sunfish—J. H. Maxwell, 9½ inches, Conodoguinet Creek.

Sucker—Dennis C. Devine, 20¼ inches, Susquehanna River.

Catfish—Mrs. Thelma K. Crum, 26½ inches, Susquehanna River.

Some of the anglers taking second places were not far behind the winners, as can be seen by the list of second place winners:

Brook Trout—Albert Garisto, 15¾ inches.
Brown Trout—Bill Hilbush, 24¼.
Rainbow Trout—H. K. McNear, 18½.
Small mouth Bass—Elwood A. Keller, 22½.
Walleyed Pike—H. E. Steffen, 23¾.
Pickerel—Claude M. Bretz, 19½.
Rock Bass—D. E. Davidson, 8⅞.
Sunfish—H. K. McNear, 9.
Sucker—Mrs. Harry R. Reynolds, 19.
Catfish—Harry Warden, 25½.

All winners were from Harrisburg and vicinity.

What's New in Fishing Books

Reviewed by Hugh Johnson

Now is the time when all good men and true begin to think, talk, and dream about trout—when men moon away into their own thoughts of favorite pools, the first fluttering of Quill Gordons from the water's surface, the first heart-stopping flash of trout rising to fly. Trout are just around the corner, and bass are way over in the Great Beyond of next July, so under normal circumstances at this time I not only couldn't and wouldn't pry my own thoughts away from trout but I wouldn't dare to intrude upon the trout thoughts of other men. But the present circumstances are not normal. They are extraordinary, and they have to do with the publication in January of LUCAS ON BASS FISHING (Dodd, Mead and Company—$5.00), such a really distinguished addition to the literature of bass fishing that it warrants immediate attention.

LUCAS ON BASS FISHING is a completely revised, new 1949 edition (with 100 pages of new material added) of a book published a few years ago which didn't get half the notice or hoopla that it deserved. When you get through reading the 422 pages of this book, including 16 pages of excellent photographs, you feel sure that a wise old bull bass himself has been telling you his secrets, instead of Jason Lucas, angling editor of *Sports Afield*. In friendly, down-to-earth, around-the-campfire talk, without wandering all over the place with strings of anecdotes and vaguely relevant stories (an irritating habit of many fishing writers), Jason Lucas tells how to locate bass in stream or pond, how to cast, how to give tantalizing action to a plug on the retrieve, how to play a fish, what lures to use for fishing at various levels and under different conditions, and what kind of rod, reel, and line to use. He explains a rather unique and extremely credible system of marking a good bass spot on a lake so that the fisherman can return to the exact location unerringly a day, a month, or ten years later. In short, LUCAS ON BASS FISHING contains more straight, useful "bass dope" than any other book I've ever read—and that includes some very good ones.

Lucas is a champion of the fairly long, light casting rod and of light tackle in general, of very small lures for fishing deep as well as on the surface, and he prefers fishing a plug deep, working it from the bottom up because that is the way to pick up the "busters." Furthermore, he has a sense of humor which flows naturally with his writing, so the reader chuckles while he learns. A *swell* book!

(Dodd, Mead and Company is located at 432 Fourth Ave., New York, N. Y.)

PROPER TROUT TACKLE

(*From Page 3*)

can be clearly seen that the need for a box or container to store leaders is a necessary part of the angler's equipment.

Flies: To fully explain the many varieties of flies which the angler needs, it would take a lengthy article on this subject alone, but we shall deal with types and sizes briefly.

For dry fly fishing, the flies should have light weight wire hooks and should have stiff glossy hackles. This causes the flies to ride high on the surface of the water and makes a rather true picture of an insect. Sizes of dry flies can be 8's, 10's, 12's, 14's, 16's, and 18's. The most popular are the 12's and 14's. Along with a selection of sizes, the fly box should contain the variety of patterns best for your vicinity.

Of course, dry flies only take care of the times when the trout are surface feeding. There are times when the trout are feeding on underwater creatures, drowned insects, minnows, etc. Under these conditions, we need nymphs and wet flies as well as streamer flies and possibly a small spinner.

One thing which is well to remember is that no matter what artificial lure you are using, that lure must be fished so that it acts, as well as gives the appearance of the living creature.

Don't attempt to fish a "Silver Doctor" fly dry, that is on the surface of the water to imitate a fallen insect but instead use this pattern wet and move it about in jerks to imitate a minnow as it is intended. Likewise nymphs, streamers, and even wet flies work best if each lure used is really used to imitate what it is supposed to be.



A proper line is required to 'fit' the rod. It should have a flawless finish for smooth running through the guides.

A selection of flies, a few of each type, should be carried, and ranks along with the rod and line in importance to the fisherman.

Fly Books and Containers: Dry flies must be carried in some type container so that they are protected from being crushed. There are numerous containers available for this purpose. Plastic boxes having sections or divisions, metal boxes having clips to which the fly is attached, and the latest addition is a metal box with magnetic knobs which hold the flies in place and prevent them from falling out of the box when opened. However, of the many kinds available, the transparent plastic box is one of the most popular. The contents can be viewed without opening the box, and one glance will generally tell if the item is included.

Wet flies can be kept in a book having felt leaves. This flattens and absorbs moisture from the fly and is ideal for both eyed or snelled wet flies. Streamer flies can be carried with the wet flies in these books and the same advantage is applied to them.

Dry Fly Oil: This item is essential to fishermen who are dry fly pursuits. The fly is dipped in the solution and is waterproofed. It is merely a solution of gasoline or other chemical in which wax has been dissolved. In submerging the fly, it is then covered with a thin wax coating and is waterproofed for the period of time that it takes the wax to be washed off. A good homemade fly float can be easily made by dissolving a cake of paraffin in a pint of gasoline.

Line Dressings: A good dressing applied to a dry line is a must for dry fly angling. It can not be expected that a tiny trout fly will ride high on the surface if the line to which it is attached, by means of a fine leader, is under water. There are a number of good line greases or dressings on the market which are excellent "line floaters." Bear in mind, that the line can not be wet before the dressing is applied. This would defeat the purpose of keeping the water from entering the pores of the line and becoming water logged.

Leader Sink: In dry fly fishing, the line as well as the fly must float, however, the connecting 'link' between the floating line and fly must be invisible in order to have a successful day astream.

If the leader stays on top the water, it is clearly visible to both the angler and the fish, hence, it must be submerged under water. A leader, coated with this commercial solution, will sink from view and proves itself a good item to carry amidst your equipment.

Lead Shot and Sinkers: Split shot or 'rap-around' strips of lead are used



Stanley Weaver, of Quakertown, and a brown trout he took from Lake Wallenpaupack. The fish was 23 inches long. Sorry, but the weight was not given.

when bait fishing or when using wet flies, and it becomes necessary to fish close to the bottom of the stream. Fast water especially calls for the use of lead in order to have the fly or bait hug the bottom where the fish are located. A package of either type sinkers is essential to help complete the list of necessary items used in angling.

Wading Gear: Two types of wading gear is available to the angler—the full trouser waders and the hip-length rubber boots.

Either will serve the angler well although the trouser waders have a slight advantage in height, but has one bad feature: being rather hot in mid summer unless the wearer stays in deep water most of the time.

The most important feature of either is that they fit the feet properly. Unless they do fit, it is most uncomfortable to walk on the slippery rocks and to walk any distance. They should be large enough so that a pair of heavy wool socks can be worn to absorb the perspiration as well as cushion the feet when walking.

A patching kit is a great aid if you are along the stream and snag a hole in either type. A few minutes with a patching kit soon renders the waders waterproof again.

Creels: A fish carrier is of importance to every angler. It should not be merely a container in which fish can be transported, but should be able to keep them as fresh as possible. The split willow creel is conceded to be the best for this job. If the creel is kept



lark Smith, of Curwensville, caught this brown rout from the Driftwood Branch of the Sinne-ahoning Creek. The fish was 28 inches long nd weighed 7 pounds and 13 ounces. May 16th was the day.

noist, the evaporation keeps the fish ather cool even in the warmest days. The canvas bag has become popular owever, this container soon dries the sh and unless cleansed after each use ecomes a most displeasing article.

There is also an imported grass mat-ing material which is made into a at bag affair. This is very light and eems to be well out of the way when eing carried, and it has the same ad-antages as the split willow creel.

Nets: Nets can be excess baggage at imes and at other times it can be the ne piece of equipment which brought bout the landing of that large trout. When it is left at home that is the ime is is most needed, after that it ould be carried dozens of times before real need for it arises again.

A net does minimize the chance of urting a small fish when being land-d so that it can be returned to the vater, also few are the large fish that an not be played, tired out and beach-d on the shore.

In choosing a net, get one which is arge enough to handle the biggest of sh. There is a wide variety to make our choice from—metal framed nets, illow or wood frame, collapsible nets, ll with short or long handles. The im-ortant thing is to have a net of a fair-y large diameter and the net itself airly deep.

While this item is not a necessity, it s nice to own one providing you fol-ow this game of fishing for any length f time.

Wading Jacket: This item is a luxury ccessory, but the many pockets capable of carrying and storing the handy tackle equipment surpasses the typical jacket or coat usually worn.

The wading jacket is made short, coming slightly below the wading trousers, and one does not need to worry about wading into water and having the bottom or pockets of the jacket becoming wet.

I generally have a vest or jacket completely stocked for trout fishing and one for bass fishing. At the time of departure on a fishing jaunt, this method is a great time saver, and I never need worry whether I had forgotten anything. Any item which was depleted or lost during the outing is quickly replaced when reaching home and each jacket is always in readiness for the next trip.

Bait Container: When bait fishing, the container should be suited to the type bait carried. There are a number of bait cans on the market which are not expensive and are made so that they are efficient bait containers.

Generally they have loops on the back so that they can be placed on the angler's trouser belt, some are curved slightly to fit the user's body. For carrying grasshoppers, crickets, hellgrammites and other air breathing insects, there is a very good wire cage bait container which keeps the bait lively.

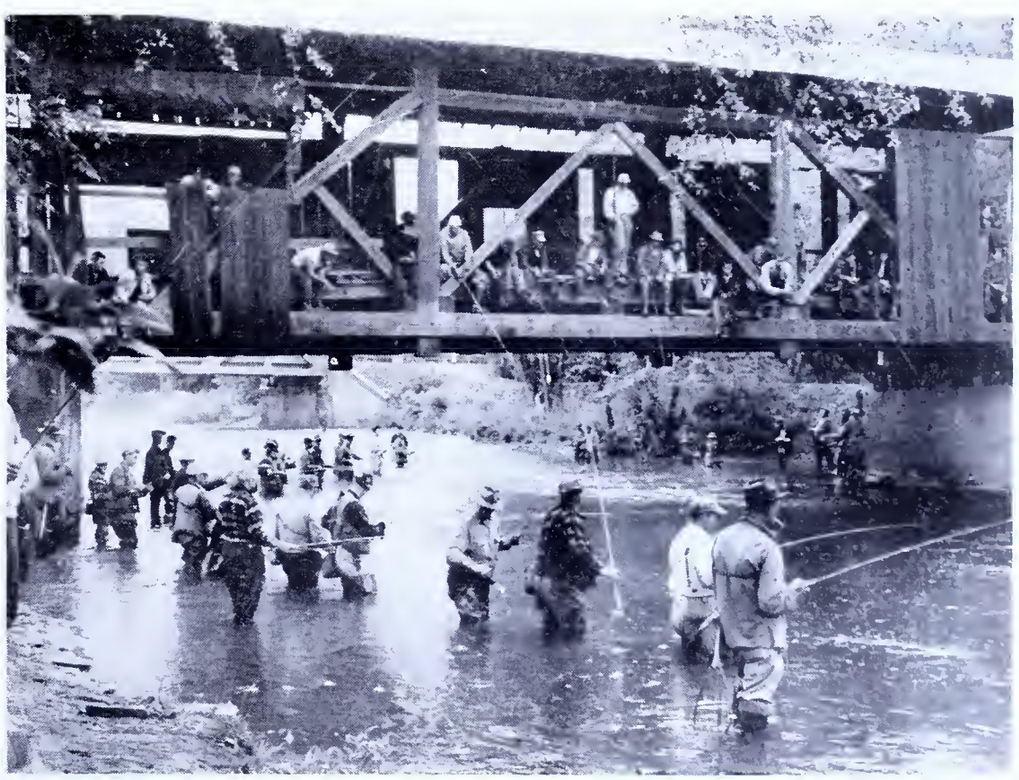
There are several types available for carrying worms. One particularly I have in mind is a roll type box. Since worms have a habit of going to the bottom of the container and leaving the soil on top, this box is so designed that the can revolves until the lid is the bottom. When a worm is desired, the can is rolled or turned until the lid is on top. Likewise the worms which were on the bottom are turned on top and one can be selected without emptying half the soil from the container.

A bait container costs but a few cents, and its convenience soon is recognized as a handy item to be included in the angler's equipment.

While there are numerous miscellaneous items such as a scale for weighing fish, stiletto for opening and cleaning the tiny eyes of flies, a thermometer, fishing knife and water proof matches which could be included in the proper tackle, those which were mentioned cover the basic needs of the average angler.

For anyone beginning in this game of angling, I suggest you buy only the absolutely essential things. Then as you progress in your fishing you just naturally acquire a more complete collection.

However, having the proper tackle does not guarantee results when along a stream. A thorough knowledge must be had of each item of equipment in order to use each properly. The means of catching fish is through proper tackle—plus an efficient angler behind them.



Bloomsburg "Morning Press" photo

"Move over brother—Give the fish a chance." 92 fishermen, at least 60 in view angling for some 6,000 legal trout stocked in Fishing Creek between Orangeville and Benton in Columbia County. The photo was taken June 7, 1948.

PENNA. ANGLER'S VACATION

(*From page 7*)

ripple on the surface of the water, these patterns were deadly when used with 4x and 5x tippets. Leaders often reached to 11 feet and when fish were hooked in the beaver ponds they were easily netted, for conditions for playing large fish were perfect. The last afternoon I fished over 13 large rising fish in Spring Creek, hooked everyone of them and netted ten, finishing with my original 5x tippet. Fish feeding in the riffles took the fly almost on the first cast and when hooked would head for deeper water which often ran over 6 feet in depth and crystal clear. Rainbows were easily subdued in comparison to the cutthroats. Cutthroats seldom tore around or left the surface of the water, but just kept up a steady fight which outlasts the rainbow three times as long. Often I would place a landing net in the water ready to take the fish when he would gradually and subtly pull away for 20 or 30 feet, sometimes as many as six times when each time I thought I had him subdued.

My two nephews, Frank and John Craighead and my son Bill insisted that I take a river trip in one of the Navy life rafts. Fishing was so excellent at Moose, and for lack of time I hesitated at first but finally consented to make the trip. The rubber life rafts are much safer than any other type of boat used on the river and it is almost impossible to upset them. They are very comfortable and it is amazing how they glide over water that is only several inches deep. Time after time we would hit rocks or slide over the bottom of the stream but the raft never once sprung a leak or showed any signs of wear after the trip.

Wednesday morning about 9:00 A.M. we loaded the raft on top of the car and were driven up the river to about eight miles above Moose. The raft was put on the water, the four of us piled in and immediately shoved off. We had not traveled two hundred yards until the raft was beached at a marvelous looking stretch of water and we all went to work. I could see a few nice trout rising both up and down stream. After fifteen or twenty minutes fishing the other three were ready to shove off again, and this was hard to understand for I could have spent the rest of the day at that one spot. The only remark they made was "You haven't seen anything!" This same thing happened time and again and nearly every stop produced a few very large fish. Imagine fishing spots that are probably visited only once or twice a year and likely not at all, for many of the places that we fished were inaccessible to any other means of travel than by boat or raft. Many large fish were hooked but very few were netted for the water was too swift. Occasionally we could steer one of these large fellows into an eddy and finally land him. This made for marvelous sport. The only species caught were rainbows and cutthroats, the latter predominating. The few fish that we kept were heavy and well proportioned and were found to be full of the little reddish-black ant above described.

In the Snake River thousands of small suckers and white fish could be seen, the suckers reaching fifteen inches in length and the white fish considerably larger. Besides the abundance of insect life these small fish supply excellent food for the trout. The abundance of small trout was almost unbelievable. In some of the quieter spots or eddies, I saw many thousands of them about one-half to two inches in length. The mortality must be very great when the river gets high in the spring of the year.

Among the many fine fishermen and interesting people in that region it was my privilege and pleasure not only to meet but to fish with a Mrs. Carey who was the wife of the late Robert C. Carey, a former governor of the State of Wyoming. She proved to me that the fair sex can master the fine art of fly fishing to the highest degree for she was a recognized authority in that part of the country. One day on the way to the Snake River Mrs. Carey stopped the car on the edge of a bank. Below was a large beaver pond where she had previously taken five pound brookies. Looking down we saw below us two large bull moose feeding on the moss on the bottom of the pond. They paid no attention to us but made a picture long to be remembered so we watched them for awhile before moving on.

I feel that the limit of twelve fish a day is too high in that region and that something should be done to preserve for years to come the high quality of this finest and most picturesque trout stream in our country. Needless to say, I am already looking forward to next summer when I hope to return to the lure of the fascinating Snake River.



The navy life boat trip was a thrill as well as a great way to catch trout as the catch will attest. This is the safest way to traverse the fast waters of the Snake.

OPEN SEASON

(*From page 9*)

rough spots. A final pair of trout are netted and released. Chet pauses to light a cigarette and a nice brown swings for a moment on his dropper fly just as mine did when I stopped to light my pipe. Chet chuckles and swears vengeance to be executed the very next time we come to this spot. Jack appears on the bank and we go through the solemn ritual of comparing catches, replacing the greens in our creels with fresh ones, then wander up to the car for the comforts that remain from lunch. The stream is deserted and the shadows are long but the warm glow of the sun remains on the back of our necks. The first slight case of sun burn marks the close of opening day.

The new beach styles make the girls look shorter but they make the men look long.

PHOTOGRAPHY FOR THE FISHERMAN

(*From page* 11)

4.5 lens. It uses 35 millimeter film the size of film used in commercial ıovies), with 20 or 36 exposures on ıch film.

Necessity for bright sunlight for very picture is not a problem with ıis camera. In fact, by setting the ·ns at 4.5 and the shutter at 1/25th of second it is possible to take decent ictures in a pouring rain. With a ook of very simple instructions, it roved no task at all to learn the arious adjustments of the camera to ıeet varying light conditions.

The 35 millimeter camera has one ther advantage. The folding camera as a fixed focus; that is, if the photogapher stands at least six feet from is subject, his pictures will be in focus. he 35 millimeter camera has an adıstable focus, ranging all the way from ıree feet to infinity. This makes it ossible to get much closer to the subect, with the obvious result of a larger nage in the photograph.

The 35 millimeter camera, on the ther hand, proved not so good for takng large outdoor pictures. Because of he smallness of the film, the images re too tiny.

So the large area pictures are left or the folding camera, and the 35 millineter is employed for close-up work. t does an excellent job of recording uch things as a man displaying a ish, another stringing up his casting od, or a couple of fellows eating sandviches.

It reaches out even a bit further. It will do a good job of showing an angler n a small portion of a stream pool, or of a waterfall, or some other area not quite large enough to be called a panorama.

The 35 millimeter camera ranges all the way from $30 up to $300 in cost. But the ordinary angler can get quite satisfactory results from a camera with a shutter speed of 150th of a second and a 4.5 lens, and in this classification a camera costs between $30 and $60.

Field cases are obtainable for both the cameras that have been described. The 35 millimeter, because of its small size, is the most handy to carry. The front of the field case flops down when it is unfastened, and it's simple to swing the camera up to eye level, compose the picture, and click the shutter.

There is yet a third camera in my collection—and while it is the cheapest of them all, it does a magnificent job.

It also is a small box using a 620 film, which incidentally has eight exposures to the roll. It has a view-finder on its top which shows the photographer exactly what he will have in his finished picture.

There are no gadgets to worry about. The shutter speed, like that of the folding camera, is fixed at instantaneous. If a close-up picture is to be taken, a little dial is set to "5 to 10 feet." If the range is longer, the dial is set at "Beyond 10 feet."

This camera has a synchronized flash on its top. It uses No. 11 flash bulbs, and it works quite simply. The photographer simply aims his camera, composes the picture in the view-finder, and presses the shutter button. The button operates both the shutter and the flash.

With such a camera pictures can be taken indoors at any time, day or night; outdoors, at dusk or even at night; around a campfire, or in deep shadows outdoors.

The flash simply produces a second or two of strong artificial sunlight that makes the snapshot possible.

The camera and flash cost $14.40, including a sales tax.

The three cameras I have described can be used by any amateur. Not every fisherman will require all three of them. I'd be willing to bet, actually, that the little flash camera alone would meet most of the angler's day to day requirements.

I have purposely avoided the subject of camera gadgets—such as filters, portrait lenses, and so on. They are things the amateur gets into gradually, and according to his needs for them.

Nor does merely describing a couple of cameras take in the whole subject of fishing photography. Processing the films once the pictures have been taken is another fascinating subject, entirely within the capabilities of any amateur. They will be discussed in another article in the next issue of this magazine.

I wish I were a little fish
Beneath the ice so shiny;
And when the ice show comes to town;
I'd see Sonja Heinie.

Conservation Can't Wait

Pennsylvania's Sanitary Water Board



Left to right: E. A. Holbrook, Dean, School of Engineering, University of Pittsburgh; Henry Lowe Brownback, Norristown, Pa.; Adm. M. F. Draemel, Secretary, Department of Forest and Waters; Dr. Norris W. Vaux, Chairman, Secretary Penna. Department of Health; Richard Maize, Secretary Department of Mines; C. A. French, Commissioner of Fisheries, Penna. Fish Comsion; Frank M. Geer, North Warren, Pa.

Spearheading the mammoth stream clearance program, the Sanitary Water Board has become a beehive of activity. The program designed to improve the public health and sanitation in the Commonwealth holds keen interest with fishermen. A natural consequence to clean pure streams must be improved fish habitat and good fishing!

Pennsylvania Streams Regularly Stocked with Trout

A guide to the leading trout waters in Pennsylvania which are approved, regularly stocked—and open to public fishing listing the major streams and lakes—size—county location—highway routes, the kinds of trout they contain and points from which they can be reached.

ADAMS COUNTY

Name of Stream	Specie stocked with	Reached at	Approx. Amt. of Water
Antietam Little, E. Br.	Brook	Waynesboro, Rt. 16	3 mi.
Carbaugh Run	Brook	Caledonia State Pk., Rt. 30	3 mi.
Chambersburg Resv.	Rainbow	Caledonia State Pk., Rt. 30	22 A.
Conewago Creek	Brown	Arndtsville, Rt. 234	5 mi.
Conococheague Creek	Brown	Caledonia State Pk., Rt. 30	2 mi.
Hartman Dam, Marsh Creek	Rainbow	Cashtown, Rt. 30	3 A.
Marsh Creek, Little	Brook	Orrtanna, Rt. 234	2 mi.
Middle Creek	Brown	Fairfield, Rt. 116	6 mi.
Toms Run	Brook	Fairfield, Rt. 116	4 mi.

ALLEGHENY NATIONAL FOREST IN FOREST, WARREN, ELK AND McKEAN COUNTIES

Bear Creek	Brook, Rainbow	Ridgway, Rt. 219	8 mi.
Beaver Creek	Brook	Endeavor, Rt. 666	3 mi.
Blue Jay Creek	Brook	Lynch, Rt. 666	5 mi.
Browns Run	Brook	Glade, Rt. 6	2 mi.
Chappell Fork	Rainbow	Marshburg, Rt. 59	8 mi.
Coon Creek, Little	Brook	Marienville, Rt. 68	4 mi.
Farnsworth Creek	Brook	Clarendon, Rt. 6	5 mi.
Four Mile Creek	Brook	Saybrook, Rt. 6	5 mi.
Hickory Creek, East	Brown	East Hickory, Rt. 62	5 mi.
Kinzua Creek, South Fork	Brown	Kane, Rt. 6	7 mi.
Meade Run	Brook	Kane, Rt. 6	2 mi.
Mill Creek, Big	Brook, Rainbow	Ridgway, Rt. 219	8 mi.
Millstone Creek, E. Br.	Brown, Rainbow	Marienville, Rt. 68	5 mi.
Millstone Creek, W. Br.	Brown	Marienville, Rt. 68	1 mi.
Minister Run	Brook	Sheffield, Rt. 6	1 mi.
Ross Run	Brook	Kellettville, Rt. 666	1 mi.
Salmon Creek	Brown, Rainbow	Marienville, Rt. 68	7 mi.
Six Mile Run	Brook	Tiona, Rt. 6	3 mi.

ALLEGHENY COUNTY

Spring Creek	Brown, Rainbow	Pigeon, Rt. 68	2 mi.
Spring Creek, E. Br.	Brook, Rainbow	Russell City, Rt. 68	1 mi.
Sugar Run	Brook, Brown	Cornplanter, Rt. 59	6 mi.
Suger Run, N. Br.	Brook	Cornplanter, Rt. 59	4 mi.
Tionesta, E. Br.	Brown	Donaldson, Rt. 948	3 mi.
Tionesta, S. Br.	Brown	Donaldson, Rt. 948	6 mi.
Tionesta, W. Br.	Brown	Clarendon, Rt. 6	6 mi.
Two Mile Run	Brook	Ludlow, Rt. 6	3 mi.
Willow Creek	Brown	Corydon, Rt. 159	1 mi.
Wilson Run	Brook	Wilcox, Rt. 219	5 mi.

ARMSTRONG COUNTY

Cornplanter Run	Brook	Boggsville, Rt. 228	2 mi.
Buffalo Creek	Brown, Rainbow	Worthington, Rt. 422	10 mi.
Huling Run	Brook, Rainbow	Cowansville, Rt. 268	7 mi.
Mill Run	Brook	Kittanning, Rt. 66	4 mi.
Patterson Run	Brook	Worthington, Rt. 422	5 mi.
Pine Creek, North Fork	Brook	Baum, Rt. 66	5 mi.
Scrubgrass Creek	Brown	Goheenville, Rt. 66	4 mi.

BEAVER COUNTY

Beaver River, Little, North Fork	Brown	Darlington, Rt. 51	5 mi.
Brady Run	Brook, Rainbow	Rochester, Rt. 68	5 mi.
Service Creek	Brook, Rainbow	Harshaville, Rt. 30	4 mi.
Travers Creek, Big	Brook	Frankfort Springs, Rt. 18	7 mi.

BEDFORD COUNTY

Beaver Creek	Brook	Loysburg, Rt. 36	6 mi.
Bobs Creek	Brown	Pavia, Rt. 869	7 mi.
Cove Creek	Brown	Charlesville, Rt. 326	12 mi.
Earnest Run	Brown	Bedford, Rt. 30	2 mi.
Flintstone Creek	Brook	Maryland St. Line, Rt. 40	5 mi.
Imlertown Run	Brown	Bedford, Rt. 30	2 mi.
Koon Lake, Thos. W.	Rainbow	Centerville, Rt. 220	268 A.
Maple Run	Brook	Yellow Creek, Rt. 26	3 mi.
Potter Creek	Brook	Waterside, Rt. 36	4 mi.
Ravers Run	Brook	Saxton, Rt. 26	3 mi.
Raystown Br. Juniata River	Brown	Bedford, Rt. 30	18 mi.
Replogle Dam	Rainbow	Woodbury, Rt. 36	7 A.
Shermans Valley Run	Brown	Hopewell, Rt. 915	5 mi.
Shobers Run	Brown	Bedford, Rt. 30	8 mi.
Three Springs Creek	Brook	New Enterprise, Rt. 869	3 mi.
Wills Creek	Brown	Hyndman, Rt. 96	3 mi.
Yellow Creek	Brook, Brown, Rainbow	Loysburg, Rt. 36	18 mi.

BERKS COUNTY

Back Creek	Brook	Joanna, Rt. 82	3 mi.
Hay Creek	Brown	Birdsboro, Rt. 83	7 mi.
Manatawney Creek	Brown, Rainbow	Oley, Rt. 73	11 mi.
Mill Creek, trib. Little Swatara	Brook	Bethel, Rt. 22	4 mi.
Mill Creek, trib. Schuylkill River	Brook	Hamburg, Rt. 22	4 mi.
Moslem Creek	Brook	Moslem Springs, Rt. 222	2 mi.
Northkill Creek	Brook	Shartlesville, Rt. 22	4 mi.
Perkiomen Creek, N. W. Br.	Brook, Rainbow	Boyertown, Rt. 100	4 mi.
Pine Crek, trib. Bieber Creek	Brook	Oley, Rt. 73	4 mi.
Pine Creek, trib. Maiden Creek	Rainbow	Kempton, Rt. 53	4 mi.
Sacony Creek	Brook	Kutztown, Rt. 222	4 mi.
Spring Creek	Brook	Wernersville, Rt. 422	3 mi.
Swamp Creek	Brook	Morgantown, Rt. 42	3 mi.

BLAIR COUNTY

Bald Eagle Creek	Brown	Tyrone, Rt. 220	5 mi.
Bells Gap Run	Brook	Bellwood, Rt. 220	5 mi.
Big Fill Run	Brook, Rainbow	Bald Eagle, Rt. 220	2 mi.
Blair Gap Run	Brook	Duncansville, Rt. 22	5 mi.
Bobs Creek	Brook	Blueknob, Rt. 164	4 mi.
Canoe Creek	Brown	Canoe Creek, Rt. 22	4 mi.
Clover Creek	Brown	Williamsburg, Rt. 866	15 mi.
Frankstown Br. Juniata River	Brown, Rainbow	Claysburg, Rt. 220	7 mi.
Piney Creek	Brown	Williamsburg, Rt. 866	7 mi.
Riggles Gap Run	Brook	Pinecroft, Rt. 220	3 mi.
Sinking Creek	Brook	Elberta, Rt. 971	2 mi.
Smokey Run	Brook	Claysburg Rt. 220	2 mi.
South Poplar Run	Brook	Claysburg, Rt. 220	5 mi.
VanScoyoc Run	Brook, Rainbow	Bald Eagle, Rt. 220	5 mi.

BRADFORD COUNTY

Millstone Creek	Brook	Powell, Rt. 414	3 mi.
Schrader Creek	Brook	Canton, Rt. 14	9 mi.
Seeley Creek	Brook	Mosherville, Rt. 549	2 mi.
South Creek	Brook	Allis Hollow, Rt. 467	2 mi.
Towanda Creek	Brown, Rainbow	Canton, Rt. 14	9 mi.

BUCKS COUNTY

Cooks Creek	Brook, Rainbow	Springtown, Rt. 412	8 mi.
Ingram Creek	Brook	New Hope, Rt. 202	2 mi.
Mill Creek	Brook, Rainbow	Doylestown, Rt. 611	6 mi.

BUTLER COUNTY

Bear Creek	Brown, Rainbow	Bruin, Rt. 268	12 mi.
Buffalo Creek	Brown, Rainbow	Millerstown, Rt. 68	5 mi.
Buffalo Run, Little	Brown, Rainbow	Butler, Rt. 8	4 mi.
Connoquenessing Creek, Little	Brown	Butler, Rt. 8	6 mi.
Silver Creek	Brown, Rainbow	Bruin, Rt. 268	7 mi.
Slippery Rock Creek, N. Br.	Brown	Harrisville, Rt. 8	3 mi.
Thorn Creek	Brown, Rainbow	Butler, Rt. 8	10 mi.

CAMBRIA COUNTY

Beaver Dam Run, trib. Clearfield Creek	Brown	Ashville, Rt. 36	2 mi.
Beaver Dam Run trib. S. Fork Little Conemaugh	Brook	Beaverdale, Rt. 869	1 mi.
Bender Run	Brook	Carrolltown, Rt. 219	3 mi.
Bens Creek	Brook, Rainbow	Portage, Rt. 53	3 mi.
Blacklick Creek, N. Br.	Brown	Belsano, Rt. 422	6 mi.
Cedar Run	Brook, Rainbow	Portage, Rt. 53	4 mi.
Chest Creek	Brook, Brown, Rainbow	Patton, Rt. 36	7 mi
Clearfield Creek	Brown	Cresson, Rt. 22	3 mi.
Conemaugh River, Little, N. Branch	Brown, Rainbow	Wilmore, Rt. 53	4 mi.
Conemaugh River, S. Br.	Brook	Lloydell, Rt. 160	3 mi.
Duclos Run	Brook	Patton, Rt. 36	3 mi.
Hinckstown Run	Brook	Vinco, Rt. 219	3 mi.
Laurel Run, Big	Brook	Dysert, Rt. 53	4 mi.
Saltlick Run	Brook	Summerhill, Rt. 53	3 mi.
Slatelick Creek	Brown	Fallentimber, Rt. 53	4 mi.

CAMERON COUNTY

Brookes Run	Brook	Lushbaugh, Rt. 872	4 mi.
Clear Creek	Brook	Emporium Rt. 120	10 mi.
Driftwood Branch	Brown, Rainbow	Emporium, Rt. 120	16 mi.
Hicks Run	Brook	Driftwood, Rt. 120	2 mi.
Hicks Run, E. Br.	Brook	Driftwood, Rt. 120	3 mi.
Hunts Run	Brook	Cameron, Rt. 120	3 mi.
Jerry Run, Upper	Brook	Sinnemahoning, Rt. 120	4 mi.
Lick Island Run	Brook	Island, Rt. 872	4 mi.

Name of Stream	Specie stocked with	Reached at	Approx. Amt. of Water
Lushbaugh Run	Brook	Lushbaugh, Rt. 872	6 mi.
Mix Run	Brook	Driftwood, Rt. 120	3 mi.
Portage Creek	Brook	Sizerville, Rt. 155	2 mi.
Sinnemahoning Creek, First Fork	Brown, Rainbow	Sinnemahoning, Rt. 120	13 mi.
Sinnemahoning Portage Creek	Brown	Emporium, Rt. 120	8 mi.
Sterling Run	Brook	Sterling Run, Rt. 120	5 mi.
Wykoff Run	Brook	Sinnemahoning, Rt. 120	5 mi.

CARBON COUNTY

Aquashicola Creek	Brook, Brown	Palmerton, Rt. 309	7 mi.
Bear Creek, Big	Brook, Rainbow	Christmans, Rt. 903	3 mi.
Buckwa Creek	Brown	Little Gap, Rt. 904	3 mi.
Drake Creek	Brook	Christmans, Rt. 903	2 mi.
Hayes Creek	Brown	White Haven, Rt. 940	3 mi.
Hickory Run	Brook, Brown, Rainbow	White Haven, Rt. 940	3 mi.
Hunter Creek	Brown	Little Gap, Rt. 309	4 mi.
James Run	Brook	Nesquehoning, Rt. 209	3 mi.
Lesley Run	Brook	White Haven, Rt. 940	5 mi.
Lizzard Creek	Brown	Bowmanstown, Rt. 209	7 mi.
Mauch Chunk Creek	Brook	Mauch Chunk, Rt. 209	2 mi.
Mud Run	Brown, Rainbow	Albrightsville, Rt. 903	3 mi.
Pine Run	Brook	Weisport, Rt. 209	5 mi.
Pohopoco Creek	Brown, Rainbow	Palmerton, Rt. 309	6 mi.
Quakake Creek	Brook, Rainbow	Hudsondale, Rt. 309	10 mi.
Sand Spring Run	Brook	White Haven, Rt. 940	5 mi.
Stony Creek	Brook	Christmans, Rt. 903	5 mi.

CENTRE COUNTY

Bald Eagle Creek	Brown, Rainbow	Milesburg, Rt. 220	18 mi.
Beech Creek, S. Fork	Brook	Snow Shoe, Rt. 53	5 mi.
Benner Run	Brook	Unionville, Rt. 220	4 mi.
Big Fill Run	Brook, Rainbow	Bald Eagle, Rt. 220	3 mi.
Big Run, W. Br.	Brook	Snow Shoe, Rt. 53	1 mi.
Black Bear Run	Brook	Winburne, Rt. 53	3 mi.
Cedar Creek	Brook	Boalsburg, Rt. 322	3 mi.
Cold Stream Run	Brook	Philipsburg, Rt. 322	4 mi.
Elk Creek	Brook, Brown, Rainbow	Millheim, Rt. 45	7 mi.
Fields Run	Brook	Snow Shoe, Rt. 53	1 mi.
Fishing Creek, Little	Brook	Mingoville, Rt. 64	10 mi.
Flat Rock Creek	Brook	Port Matilda, Rt. 220	7 mi.
Galbraiths Gap Run	Brook	Boalsburg, Rt. 322	3 mi.
Green Valley Dam	Brook	Pleasant Gap, Rt. 53	2 A.
Laurel Run	Brook	Spring Mills, Rt. 45	3 mi.
Lick Run	Brook	Howard, Rt. 220	3 mi.
Logan Branch	Brook, Rainbow	Bellefonte, Rt. 53	4 mi.
Marsh Creek	Brown	Howard, Rt. 220	6 mi.
Moshannon Creek, Little	Brown, Rainbow	Snow Shoe, Rt. 53	12 mi.
Moshannon Creek, Mountain Br.	Brook	Houtzdale, Rt. 53	4 mi.
Penns Creek	Brook, Brown, Rainbow	Spring Mills, Rt. 45	15 mi.
Pine Creek	Brook, Brown	Woodward, Rt. 45	10 mi.
Poe Valley Dam	Rainbow	Potters Mills, Rt. 322	27 A.
Rock Run	Brook	Snow Shoe, Rt. 53	4 mi.
Roosevelt Dam	Rainbow	Potters Mills, Rt. 322	3 A.
Sandy Run, Big	Brook	Snow Shoe, Rt. 53	1 mi.
Sandy Run, Little	Brook	Snow Shoe, Rt. 53	1 mi.
Sinking Creek	Brook, Brown	Potters Mills, Rt. 322	11 mi.
Six Mile Run	Brook	Philipsburg, Rt. 322	5 mi.
Spring Creek	Brook, Brown, Rainbow	Bellefonte, Rt. 220	12 mi.
Spruce Creek	Brown, Rainbow	Pine Grove Mills, Rt. 45	3 mi.
Sterling Run	Brook	Snow Shoe, Rt. 53	3 mi.
Wallace Run	Brook	Milesburg, Rt. 220	4 mi.
White Deer Creek	Brown	Livonia, Rt. 95	8 mi.
Wolf Run	Brook	Snow Shoe, Rt. 53	2 mi.
Yost Run	Brook	Snow Shoe, Rt. 53	1 mi.

CHESTER COUNTY

Beaver Run	Brook	Pughtown, Rt. 100	3 mi
Birch Run, trib. W. Br. Brandywine Creek	Brook	Coatesville, Rt. 30	2 mi.
Birch Run, trib. Buck Run	Brook	Buck Run, Rt. 182	3 mi.
Broad Run	Brown	Marshallton, Rt. 162	4 mi.
Broad Run, Little	Brook	Downingtown, Rt. 30	4 mi.
Doe Run	Brook	Cochranville, Rt. 41	6 mi.
French Creek	Brown, Rainbow	Knauertown, Rt. 23	17 mi.
Indian Run	Brook	Glenmore, Rt. 282	4 mi.
Matthews Run	Brook	Chester Springs, Rt. 113	4 mi.
Octoraro Creek, E. Br.	Rainbow	Atglen, Rt. 41	10 mi.
Officers Run	Brown, Rainbow	Atglen, Rt. 41	5 mi.
Pocopson Creek	Brown	Pocopson, Rt. 322	4 mi.
Rock Run	Brook	Knauertown, Rt. 23	3 mi.
Valley Creek	Brown, Rainbow	Paoli, Rt. 30	6 mi.
Valley Creek, West	Brown	Exton, Rt. 30	6 mi.
White Clay Creek	Brook, Brown	Avondale, Rt. 1	12 mi.
White Clay Creek, Middle Br.	Brown	Avondale, Rt. 1	4 mi.

CLARION COUNTY

Mill Creek	Brown, Rainbow	Clarion, Rt. 322	7 mi.
Toms Creek	Brook, Rainbow	Cooksburg, Rt. 36	3 mi.

CLEARFIELD COUNTY

Anderson Creek	Brook	Sabula, Rt. 255	4 mi.
Bear Run	Brook	Curwensville, Rt. 322	3 mi.
Bell Run	Brook	Bells Landing, Rt. 219	5 mi.
Bennetts Br. Sinnemahoning Creek	Brook	Penfield, Rt. 255	4 mi.
Bilger Run	Brook	Grampian, Rt. 322	3 mi.
Clearfield Creek, Little	Brown	New Millport, Rt. 453	3 mi.
Curry Run	Brook	Mahaffey, Rt. 219	6 mi.
Deer Creek	Brook	Lecontes Mills, Rt. 879	3 mi.
Gazzam Branch	Brook	New Millport, Rt. 453	4 mi.
Gifford Run	Brook	Lecontes Mills, Rt. 879	6 mi.
Hackenberry Run	Brook	Irvonia, Rt. 53	4 mi.
Haziett Run	Brook	Mahaffey, Rt. 219	5 mi.
Hogback Run	Brook	Curwensville, Rt. 322	3 mi.
Lick Run	Brook	Shawville, Rt. 879	6 mi.
Medix Run	Brook	Weedville, Rt. 255	2 mi.
Montgomery Creek, trib. Anderson Creek	Brook	Sabula, Rt. 255	3 mi.
Montgomery Creek, trib. W. Br. Susquehanna River	Brook	Clearfield, Rt. 322	3 mi.
Mosquito Creek	Brown	Karthaus, Rt. 879	5 mi.
Mountain Run	Brook	Penfield, Rt. 153	4 mi.
Parker Dam	Rainbow	Parker Dam, Rt. 153	22 A.
Sandy Creek	Brown	Lecontes Mills, Rt. 879	5 mi.
Sawmill Run	Brook	Mahaffey, Rt. 219	5 mi.
Sugar Camp Run	Brook	DuBois, Rt. 219	3 mi.
Three Runs, Upper	Brook	Karthaus, Rt. 879	5 mi.
Trout Run	Brook, Rainbow	Shawsville, Rt. 879	6 mi.
Watts Branch	Brook	New Millport, Rt. 453	3 mi.
Whiskey Run	Brook	McGees Mills, Rt. 63	5 mi.
Wilson Run	Brook	Mahaffey, Rt. 219	4 mi.
Witmer Run, North	Brown	Irvona, Rt. 53	3 mi.
Witmer Run, South	Brown	Irvona, Rt. 53	4 mi.

CLINTON COUNTY

Baker Run	Brook, Rainbow	Glen Union, Rt. 120	4 mi.
Beaverdam Run	Brook	Hammersley Fork, Rt. 144	3 mi.
Big Run	Brook	Renovo, Rt. 120	1 mi.
Big Run, Middle Br.	Brook	Renovo, Rt. 120	5 mi.
Big Run, Swamp Br.	Brook	Renovo, Rt. 120	5 mi.
Birch Island Run	Brook	Karthaus, Rt. 879	4 mi.
Cedar Run	Brook	Cedar Springs, Rt. 220	5 mi.
Chatham Run	Brook, Rainbow	Woolrich, Rt. 664	3 mi.
Cherry Creek	Brook	Lamar, Rt. 220	4 mi.
Cooks Run	Brook	Cooks Run, Rt. 120	6 mi.
Fishing Creek, Big	Brook, Brown, Rainbow	Lamar, Rt. 220	16 mi.
Hammersley Fork	Brook	Hammersley Fork, Rt. 144	3 mi.
Hyner Run	Brook	Hyner, Rt. 120	3 mi.
Kettle Creek	Brook, Rainbow	Hammersley Fork, Rt. 144	21 mi.
Lick Run	Brook	Lock Haven, Rt. 220	4 mi.
Long Run	Brook	Salona, Rt. 880	3 mi.
Paddy Run	Brook	Renovo, Rt. 120	3 mi.
Rattlesnake Run	Brook	Hyner, Rt. 120	3 mi.
Rauch Creek	Brook	Rauchtown, Rt. 880	6 mi.
Tangascootack Creek	Brook	Lock Haven, Rt. 220	2 mi.
Tangascootack Creek, N. Br.	Brook	Lock Haven, Rt. 220	2 mi.
Trouts Forks	Brook	Hammersley Fork, Rt. 144	4 mi.
Young Woman's Creek	Brown	North Bend, Rt. 120	2 mi.
Young Woman's Creek, Right Br.	Brown	North Bend, Rt. 120	8 mi.
Young Woman's Creek, W. Br.	Brown	North Bend, Rt. 120	5 mi.

COLUMBIA COUNTY

Coles Creek	Brook	Sereno, Rt. 42	4 mi.
Fishing Creek	Brown, Rainbow	Benton, Rt. 115	6 mi.
Lick Run	Brook	Numidian, Rt. 42	4 mi.
Mugser Run	Brown	Elysburg, Rt. 54	4 mi.
Roaring Creek	Brook, Brown	Catawissa, Rt. 42	13 mi.
West Creek	Brook	Benton, Rt. 115	4 mi.

CRAWFORD COUNTY

Caldwell Creek	Brown	Titusville, Rt. 36	2 mi.
Conneautee Creek, Little	Brown, Rainbow	Edinboro, Rt. 99	1 mi.
Gravel Run	Brown	Woodcock, Rt. 86	3 mi.
McLaughlin Run	Brook	Hydetown, Rt. 8	3 mi.
Muddy Creek	Brown, Rainbow	Little Cooley, Rt. 77	6 mi.
Pine Creek	Brown	Titusville, Rt. 36	3 mi.
Stearns Run	Brook	Titusville, Rt. 36	3 mi.
Sugar Creek	Brown, Rainbow	Townville, Rt. 408	4 mi.
Suger Creek, E. Br.	Brook, Rainbow	Diamond, Rt. 27	3 mi.
Sugar Creek, Little	Brown, Rainbow	Cochranton, Rt. 322	6 mi.
Thompson Run	Brown	Hydetown, Rt. 8	4 mi.
Woodcock Creek	Brown, Rainbow	Seagertown, Rt. 6	10 mi.

CUMBERLAND COUNTY

Big Springs	Brook, Rainbow	Newville, Rt. 233	4 mi.
Boiling Springs Lake	Brown, Rainbow	Boiling Springs, Rt. 174	9 A.
Cockley Run	Brook	Sheppardstown, Rt. 114	2 mi.
Green Springs	Brook	Newville, Rt. 233	2 mi.
Hogestown Run	Brook, Rainbow	Hogestown, Rt. 11	4 mi.
Letort Springs	Brook, Rainbow	Carlisle, Rt. 11	3 mi.
Middle Spring Creek	Brown	Shippensburg, Rt. 11	4 mi.
Mountain Creek	Brook, Brown	Pine Grove Furnace, Rt. 233	6 mi.
Old Town Run	Brook	Boiling Springs, Rt. 174	3 mi.
Yellow Breeches Creek	Brown, Rainbow	Huntsdale, Rt. 233	10 mi.

DAUPHIN COUNTY

Clarks Creek	Brown, Rainbow	Tower City, Rt. 209	7 mi.
Manada Creek	Brook	Fort Hunter, Rt. 22	4 mi.
Powells Creek, N. Fork	Brook	Carsonville, Rt.	5 mi.

Name of Stream	Specie stocked with	Reached at	Approx. Amt. of Water
Powells Creek S. Fork	Brook	Carsonville Rt.	4 mi.
Rattling Creek	Brook	Lykens, Rt. 209	1 mi.
Rattling Creek, E. Br.	Brook	Lykens, Rt. 209	1 mi.
Rattling Creek, W. Br.	Brook	Lykens, Rt. 209	1 mi.
Stony Creek	Brook, Rainbow	Dauphin, Rt. 22	15 mi.

DELAWARE COUNTY

Chester Creek	Brown, Rainbow	Media, Rt. 1	7 mi.
Chester Creek, W. Br.	Brook, Rainbow	Media, Rt. 1	6 mi.
Ridley Creek	Brook	Media, Rt. 1	4 mi.

ELK COUNTY

Belmuth Run	Brook	Carman, Rt. 949	3 mi.
Big Run	Brook	Hallton, Rt.	4 mi.
Clarion Creek, W. Br.	Brown, Rainbow	Wilcox, Rt. 219	5 mi.
Clarion River, E. Br.	Brown, Rainbow	Glen Hazel, Rt.	7 mi.
Clarion River, W. Br.	Brown, Rainbow	Johnsonburg, Rt. 219	6 mi.
Crooked Creek	Brook	Glen Hazel, Rt.	3 mi.
Driftwood Branch	Brown	Sterling Run, Rt. 120	4 mi.
Hicks Run	Brook	Driftwood, Rt. 120	4 mi.
Hicks Run, E. Br.	Brook	Driftwood, 120	3 mi.
Island Run	Brook	Ridgway, Rt. 219	4 mi.
Kersey Run	Brook	Byrnedale, Rt. 255	3 mi.
Kersey Run, W. Br.	Brook	Byrnedale, Rt. 255	5 mi.
Laurel Run	Brook	Ridgway, Rt. 219	6 mi.
Maxwell Run	Brook	Hallton, Rt.	2 mi.
Medix Run	Brook, Rainbow	Weedville, Rt. 555	8 mi.
Mix Run	Brook	Mix Run, Rt. 555	4 mi.
Paige Run	Brook	Medix Run, Rt. 555	3 mi.
Seven Mile Run	Brook	Wilcox, Rt. 219	2 mi.
Spring Run	Brook	Benezette, Rt. 555	5 mi.
Straight Creek	Brook	St. Marys, Rt. 120	5 mi.
Straight Creek, S. Br.	Brook	St. Marys, Rt. 120	1 mi.
Trout Run	Brook, Rainbow	Benezette, Rt. 555	1 mi.
Vineyard Run	Brook	Brockway, Rt. 219	2 mi.
Wolf Lick Run	Brook	Kersey, Rt. 948	4 mi.
Wyncoop Run	Brook	Millstone, Rt. 949	2 mi.

ERIE COUNTY

Bear Run	Brook	Fairview, Rt. 20	4 mi.
Beaverdam Run	Brook, Rainbow	Beaverdam, Rt. 89	4 mi.
Black Creek	Brook	Waterford, Rt. 19	4 mi.
Conneautee Creek	Brown, Rainbow	Edinboro, Rt. 99	4 mi.
Conneautee Creek, Little	Brown, Rainbow	Edinboro, Rt. 99	3 mi.
Darrow Brook	Brook	Wattsburg, Rt. 8	3 mi.
French Creek, S. Br.	Brown, Rainbow	Corry, Rt. 6	5 mi.
Hatch Hollow Run	Brook	Wattsburg, Rt. 8	3 mi.
Pleasant Lake	Rainbow	Arbuckle, Rt. 8	60 A.
Shaw Run	Brook	Waterford, Rt. 19	2 mi.
Taylor Run	Brook	Albion, Rt. 6 N	3 mi.
Trout Run	Brook	Fairview, Rt. 98	3 mi.
Vincent Run	Brook	Union City, Rt. 8	3 mi.

FAYETTE COUNTY

Black Creek	Brook	Indian Head, Rt. 711	5 mi.
Beaver Run	Brook	Ohiopyle, Rt. 381	3 mi.
Buck Run	Brook	Indian Head, Rt. 711	2 mi.
Dunbar Creek	Brown, Rainbow	Dunbar, Rt. 119	4 mi.
Indian Creek	Brown	Melcroft, Rt. 711	3 mi.
Laurel Run	Brook	Ohiopyle, Rt. 381	3 mi.
Meadow, Run Big	Brown, Rainbow	Farmington, Rt. 40	4 mi.
Mill Run, trib. Big Sandy Creek	Brook	Elliottsville, Rt. 383	4 mi.
Mill run trib. Indian Creek	Brook	Indian Head, Rt. 711	4 mi.
Morgan Run	Brook	Connellsville, Rt. 119	2 mi.
Mountain Creek	Brook	Smithfield, Rt. 119	4 mi.
Mountain Creek, S. Br.	Brook	Smithfield, Rt. 119	3 mi.
Sandy Creek, Big	Brown	Elliottsville, Rt. 381	5 mi.

FOREST COUNTY

Coon Creek	Brook, Rainbow	Nebraska, Rt. 66	1 mi.
Hemlock Creek	Brook, Rainbow	Venus, Rt. 157	2 mi.
Hickory Creek, Little	Brook	West Hickory, Rt. 127	1 mi.
Hickory Creek, West	Brown, Rainbow	West Hickory, Rt. 127	4 mi.
Maple Creek	Brown	Marienville, Rt. 68	5 mi.
Tubbs Run	Brook	Tionesta, Rt. 62	5 mi.
Wards Ranch Pond	Rainbow	Vowinckle, Rt. 68	10 A.

FRANKLIN COUNTY

Antietam Creek, Little, E. Br.	Brook, Brown, Rainbow	Waynesboro, Rt. 16	10 mi.
Antietam Creek, Little, W. Br.	Brown, Rainbow	Waynesboro, Rt. 16	7 mi.
Broad Run	Brook	Fort Loudon, Rt. 30	4 mi.
Carbaugh Run	Brook	Caledonia State Pk, Rt. 30	1 mi.
Conochocheague Creek	Brown, Rainbow	Chambersburg, Rt. 30	16 mi.
Dennis Creek	Brook	Chambersburg, Rt. 30	2 mi.
Dickeys Run	Brook	Mercersburg, Rt. 16	5 mi.
Falling Springs Creek	Brook, Rainbow	Chambersburg, Rt. 30	4 mi.
Five Forks Creek	Brook	Waynesboro, Rt. 16	3 mi.
Muddy Run	Brook	Greencastle, Rt. 16	4 mi.
Roe Run	Brook	Orrstown, Rt. 433	2 mi.
Trout Run	Brook	Roxbury, Rt. 433	3 mi.

FULTON COUNTY

Name of Stream	Specie stocked with	Reached at	Approx. Amt. of Water
Aughwick Creek, Little, S. Br.	Brook, Brown	McConnellsburg, Rt. 30	8 mi.
Brush Creek	Brook	Crystal Springs, Rt. 126	1 mi.
Brush Creek, Little	Brook	Crystal Springs, Rt. 126	5 mi.
Brush Creek, South	Brook	Crystal Springs, Rt. 126	4 mi.
Nine Mile Creek	Brook	Burnt Cabins, Rt. 522	1 mi.
Oregon Creek	Brook	Wells Tannery, Rt. 915	3 mi.
Roaring Run	Brook	Websters Mills, Rt. 522	5 mi.
Spring Run	Brook, Rainbow	Websters Mills, Rt. 522	4 mi.
Wooden Bridge Creek	Brook	Hustontown, Rt. 176	5 mi.

HUNTINGDON COUNTY

Barree Run	Rainbow	Barree, Rt. 115	1 mi.
Black Log Creek	Brown	Orbisonia, Rt. 522	17 mi.
Garners Run	Brook	Neffs Mills, Rt. 305	4 mi.
Globe Run	Brook, Brown	Neffs Mills, Rt. 305	4 mi.
Greenwood Furnace Dam	Rainbow	Greenwood Furnace, Rt. 305	3 A.
Laurel Run	Brook	McAlevys Fort, Rt. 545	8 mi.
Nine Mile Run	Brook	Burnt Cabins, Rt. 522	3 mi.
Saddler Creek	Brook	Mill Creek, Rt. 5	7 mi.
Standing Stone Creek	Brook, Brown, Rainbow	McAlevys Fort, Rt. 545	16 mi.
Standing Stone Creek, E. Br.	Brown	Cornpropst Mills, Rt. 545	8 mi.
West Licking Creek	Brook	Mt. Union, Rt. 22	3 mi.
Whipple Dam	Rainbow	McAlevys Fort, Rt. 545	15 A.

INDIANA COUNTY

Laurel Run, trib. Yellow Creek, Big	Brook	Nolo, Rt. 422	4 mi.
Laurel Run, trib. Conemaugh River	Rainbow	New Florence, Rt. 711	3 mi.
Mudlick Run	Brook	Rochester Mills, Rt. 236	2 mi.
Richards Run, E. Br.	Rainbow	New Florence, Rt. 711	3 mi.
Twolick Creek, S. Br.	Brook	Pine Flats, Rt. 422	2 mi.
Yellow Creek	Brown, Rainbow	Ewing Mills, Rt. 422	6 mi.
Yellow Creek, Little	Brook	Strongtown, Rt. 422	4 mi.

JEFFERSON COUNTY

Big Run	Brook	Kramer, Rt. 952	5 mi.
Callen Run	Brook	Hallton, Rt.	3 mi.
Camp Run	Brook	Reynoldsville, Rt. 322	1 mi.
Cathers Run	Brook, Rainbow	Brookville, Rt. 322	4 mi.
Clear Creek	Brook, Brown, Rainbow	Sigel, Rt. 36	4 mi.
Coder Run	Brook	Coder, Rt. 28	4 mi.
Horam Run	Brook	Emericksville, Rt. 322	6 mi.
Manner Run Dam	Brook	Brockway, Rt. 28	5 A.
Mill Creek, trib. Clarion River	Brown, Rainbow	Corsica, Rt. 322	4 mi.
Mill Creek, trib. Sandy Lick Creek	Brown	Brookville, Rt. 322	10 mi.
Pekin Run	Brook	Brookville, Rt. 322	1 mi.
Rattlesnake Creek	Brook	Lanes Mills, Rt. 219	2 mi.
Red Bank Creek, N. Fork	Brown, Rainbow	Brookville, Rt. 322	16 mi.
Red Bank Creek, N. Fork, S. Br.	Brown	Brockway, Rt. 28	3 mi.
Sandy Creek, Little	Brown	Cool Springs, Rt. 36	7 mi.

JUNIATA COUNTY

Big Run	Brook	Mifflintown, Rt. 22	3 mi.
Delaware Creek	Brook	Thompsontown, Rt. 22	2 mi.
Horning Run	Brook	Cuba Mills, Rt. 22	3 mi.
Horse Valley Run	Brook, Rainbow	East Waterford, Rt. 75	3 mi.
Liberty Valley Run	Brook	Honey Grove, Rt. 75	3 mi.
Licking Creek	Brown	Mifflintown, Rt. 22	5 mi.
Lost Creek	Brook	McAllisterville, Rt. 35	7 mi.
Willow Run	Brook	Honey Grove, Rt. 75	7 mi.

LACKAWANNA COUNTY

Choke Creek	Brook	Thornhurst, Rt. 70	4 mi.
Gardners Creek	Brown	Milwaukee, Rt. 134	5 mi.
Lehigh River	Brown, Rainbow	Gouldsboro, Rt. 507	8 mi.
Roaring Brook	Brown	Elmhurst, Rt. 611	6 mi.
Tunkhannock Creek, S. Br.	Brown, Rainbow	Factoryville, Rt. 11	12 mi.

LANCASTER COUNTY

Charles Run	Brook	Marietta, Rt. 141	2 mi.
Chickies Creek, Big	Brown	Manheim, Rt. 72	5 mi.
Climbers Run	Brook	Martic Forge, Rt. 324	2 mi.
Conestoga Creek, Little	Brown, Rainbow	Landisville, Rt. 230	4 mi.
Donegal Creek	Brook	Marietta Rt. 141	4 mi.
Donegal Springs Br.	Brook	Marietta, Rt. 141	2 mi.
Fishing Creek	Brown, Rainbow	Chestnut Level, Rt. 72	5 mi.
Gladfelters Run	Brook	Marietta, Rt. 141	2 mi.
Hammer Creek	Brook	Lititz, Rt. 501	2 mi.
Indian Run	Brook	Ephrata, Rt. 322	2 mi.
Londonland Run	Brook	Paradise, Rt. 30	3 mi.
Longs Run	Brook	Landisville, Rt. 230	4 mi.
Middle Creek	Brook	Lititz, Rt. 501	4 mi.
Muddy Run	Brook	Holtwood, Rt. 372	3 mi.
Octoraro Creek, W. Br.	Brown, Rainbow	Quarryville, Rt. 222	10 mi.
Pequea Creek	Brook	Honey Brook, Rt. 322	5 mi.
Rock Run	Brook	Blue Ball, Rt. 322	3 mi.
Seglock Run	Brook	Lititz, Rt. 501	2 mi.
Shearers Run	Brook	Manheim, Rt. 72	2 mi.

Name of Stream	Specie stocked with	Reached at	Approx. Amt. of Water
tewarts Run	Brook	Quarryville, Rt. 222	3 mi.
warr Run	Brook	Landisville, Rt. 230	3 mi.
ucquan Creek	Brook	Martic Forge, Rt. 324	3 mi.
AWRENCE COUNTY			
lg Run	Brook	New Castle, Rt. 18	5 mi.
eer Creek	Brook	Pulaski, Rt. 278	4 mi.
eshannock Crk., Little	Brown, Rainbow	New Wilmington, Rt. 18	3 mi.
lippery Rock Creek	Brown, Rainbow	Ellwood City, Rt. 88	13 mi.
aylor Run	Brook	Plain Grove, Rt. 108	4 mi.
EBANON COUNTY			
achman Run	Brook	Annville, Rt. 422	3 mi.
vening Branch	Brown	Pine Grove, Rt. 443	4 mi.
old Mine Run	Brown	Pine Grove, Rt. 443	3 mi.
lammer Creek	Brook	Schaffersville, Rt. 501	4 mi.
lammer Creek, W. Br.	Brook	Schaffersville, Rt. 501	2 mi.
ill Creek	Brook	Newmanstown, Rt. 422	2 mi.
nitz Run	Brook	Cleona, Rt. 72	3 mi.
tony Creek	Brook	Dauphin, Rt. 22	5 mi.
ulpehocken Creek	Brown, Rainbow	Myerstown, Rt. 422	5 mi.
EHIGH COUNTY			
lg Trout Run	Brook	Slatington, Rt. 309	6 mi.
edar Creek	Brook	Cetrons, Rt. 22	3 mi.
oplay Creek	Brown	Coplay, Rt. 329	5 mi.
ron Run	Brown	Trexlertown, Rt. 222	3 mi.
ordan Creek	Brown	Allentown, Rt. 22	2 mi.
ehigh River, Little	Brook, Brown	Trexlertown, Rt. 222	12 mi.
aucon Creek, S. Br.	Brook	Coopersburg, Rt. 309	3 mi.
pring Creek	Brook	Trexlertown, Rt. 222	2 mi.
wabia Creek	Brook	Macungie, Rt. 100	3 mi.
rout Creek	Brown	Allentown, Rt. 22	2 mi.
UZERNE COUNTY			
rnold Creek	Brook	Kyttle, Rt. 115	4 mi.
olwards Run	Brook	Wapwallopen, Rt. 29	3 mi.
larveys Creek	Brown	West Nanticoke, Rt. 11	4 mi.
unlock Creek	Brook	Hunlock Creek, Rt. 11	3 mi.
unlock Creek, W. Br.	Brook	Hunlock Creek, Rt. 11	3 mi.
untingdon Creek	Brown, Rainbow	Harveyville, Rt. 239	10 mi.
itchen Creek	Brook	Harveyville, Rt. 239	3 mi.
ehigh River	Brown, Rainbow	Stoddartsville, Rt. 115	9 mi.
inesville Creek	Brook	White Haven, Rt. 940	5 mi.
escopeck Creek	Brown	Edgewood, Rt. 309	9 mi.
oley Creek	Brook	Freeland, Rt. 309	2 mi.
hillips Creek	Brook	Kyttle, Rt. 115	3 mi.
ine Creek	Brook	Fairmont Springs, Rt.	7 mi.
hickshinny Crk., Little	Brook	Shickshinny, Rt. 11	3 mi.
Wapwallopen Creek	Brown, Rainbow	Wapwallopen, Rt. 29	13 mi.
Wapwallopen Creek, Little	Brown, Rainbow	Wapwallopen, Rt. 29	5 mi.
Wrights Creek	Brook	White Haven, Rt. 940	4 mi.
YCOMING COUNTY			
Bear Creek, Little	Brook	Loyalsockville, Rt. 87	4 mi.
Black Hole Creek	Brook	Montgomery, Rt. 14	4 mi.
Blockhouse Run	Brown	English Center, Rt. 84	8 mi.
English Run	Brook	English Center, Rt. 84	3 mi.
Fourth Gap Run	Brook	Elmport, Rt. 44	4 mi.
Grays Run	Brown	Fields Station, Rt. 14	5 mi.
Hogland Run	Brook	Cogan Station, Rt. 111	5 mi.
Larry's Creek	Brown	Salladasburg, Rt. 84	5 mi.
Loyalsock Creek	Brown, Rainbow	Montoursville, Rt. 220	16 mi.
Lycoming Creek	Brown, Rainbow	Cogan Station, Rt. 111	17 mi.
Mill Creek, West	Brook	Montoursville, Rt. 220	5 mi.
Muncy Creek	Brown, Rainbow	Muncy, Rt. 220	10 mi.
Muncy Creek, Little	Brook	Lairdsville, Rt. 642	5 mi.
Pine Creek, Little	Brown, Rainbow	Waterville, Rt. 44	15 mi.
Pleasant Stream	Brown	Marsh Hill Junc., Rt. 14	7 mi.
Plunketts Creek	Brook	Barbour, Rt. 87	3 mi.
Roaring Run	Brown	Roaring Branch, Rt. 14	6 mi.
Rock Run	Brook, Rainbow	Ralston, Rt. 14	6 mi.
Slate Run	Brown	Slate Run, Rt. 893	5 mi.
Trout Run, trib. Lycoming Creek	Brook	Trout Run, Rt. 111	5 mi.
Trout Run, trib. Pine Creek	Brook	Pump Station, Rt. 44	6 mi.
Wallis Run	Brown	Loyalsockville, Rt. 87	8 mi.
White Deer Hole Creek	Brown	Ellmsport, Rt. 44	11 mi.
McKEAN COUNTY			
Bell Run	Brook	Shinglehouse, Rt. 44	2 mi.
Clarion Creek, West	Brook	Wilcox, Rt. 219	5 mi.
Five Mile Run	Brook	Wilcox, Rt. 219	2 mi.
Fuller Brook	Brook	Kushequa, Rt.	2 mi.
Kinzua Creek	Brook	Kushequa, Rt.	5 mi.
Kishequa Pond	Rainbow	Kushequa, Rt.	13 A.
Marvin Creek	Brown	Smethport, Rt. 6	10 mi.
Portage Creek	Brown, Rainbow	Port Allegheny, Rt. 6	8 mi.
Potato Creek	Brown	Crosby, Rt. 46	m
Seven Mile Run	Brook	Wilcox, Rt. 219	5 mi.
MERCER COUNTY			
Crooked Creek	Brook	Osgood, Rt. 18	3 mi.
Deer Creek	Brown, Rainbow	Millledgeville, Rt. 78	4 mi.
Lackawannack Creek	Brook	Mercer, Rt. 19	5 mi.
Mill Creek, trib. French Creek	Brook	New Lebanon, Rt. 78	5 mi.
Mill Creek, trib. Cool Spring Creek	Brook	Grove City, Rt. 78	3 mi.
Neshannock Crk., Little	Brown, Rainbow	New Wilmington, Rt. 18	5 mi.
Neshannock Crk., Little W. Br.	Brown, Rainbow	Hermitage, Rt. 18	4 mi.
Pine Run	Brook	Mercer, Rt. 19	4 mi.
Wolf Creek, E. Br.	Brook	Grove City, Rt. 78	3 mi.
Wolf Creek, N. Br.	Brook	Grove City, Rt. 78	3 mi.
Wolf Creek, W. Br.	Brook	Grove City, Rt. 78	3 mi.
MIFFLIN COUNTY			
Brookland Run	Brook	McVeytown, Rt. 22	3 mi.
Havice Creek	Brook	Selglerville, Rt. 983	4 mi.
Honey Creek	Brown	Milroy, Rt. 322	4 mi.
Kishacoquillas Creek	Brown, Rainbow	Milroy, Rt. 322	4 mi.
Kishacoquillas Creek, W. Br.	Brook, Brown, Rainbow	Reedsville, Rt. 322	14 mi.
Laurel Run	Brown	Milroy, Rt. 322	5 mi.
Licking Creek	Brown	Milflintown, Rt. 322	4 mi.
Licking Creek, West	Brook	Mt. Unlon, Rt. 22	2 mi.
Lingle Run	Brook	Milroy, Rt. 322	3 mi.
Long Meadow Run	Brown	Alfarata, Rt. 522	4 mi.
Musser Run	Brook	McVeytown, Rt. 22	3 mi.
New Lancaster Creek	Brown	Lockes Mills, Rt. 972	9 mi.
Penns Creek	Brown, Rainbow	Coburn, Rt.	3 mi.
Strodes Run	Brown	Strodes Mill, Rt. 522	3 mi.
Tea Creek	Brook	Reedsville, Rt. 322	1 mi.
Treaster Valley Run	Brook	Lockes Mills, Rt. 972	5 mi.
MONROE COUNTY			
Aquashicola Creek	Brook	Saylorsville, Rt. 115	10 mi.
Broadheads Creek	Brown, Rainbow	Stroudsburg, Rt. 611	6 mi.
Broadheads Creek, Md. Br.	Brook	Canadensis, Rt. 290	3 mi.
Buckwa Creek	Brook	Kunkletown, Rt. 904	8 mi.
Bushkill Creek, Big	Brown	Bushkill, Rt. 209	6 mi.
Dotter Creek	Brook	Kreageville, Rt. 209	6 mi.
Forest Hill Creek	Brook	Henryville, Rt. 90	7 mi.
Kettle Creek	Brook	Snyderville, Rt. 209	7 mi.
Lake Stream	Brook	Saylorsburg, Rt. 115	3 mi.
Laurel Run	Brook	Stroudsburg, Rt. 611	3 mi.
Lehigh River	Brown, Rainbow	Stoddartsville, Rt. 115	3 mi.
McMichaels Creek	Brook	East Stroudsburg, Rt. 209	4 mi.
Middle Creek	Brook	Kresgeville, Rt. 209	5 mi.
Mixsel Creek	Brook	Kunkletown, Rt. 904	5 mi.
Paradise Creek	Brown	Henryville, Rt. 90	6 mi.
Pensyl Creek	Brook	Snyderville, Rt. 209	4 mi.
Pocono Creek	Brook	Bartonville, Rt. 611	7 mi.
Pohopoco Creek	Brook	Kresgeville, Rt. 209	11 mi.
Scott Run	Brook	Scott Run, Rt. 611	3 mi.
Snow Hill Dam	Rainbow	Canadensis, Rt. 290	4 A.
Tobyhanna Creek	Brown, Rainbow	Tobyhanna, Rt. 611	7 mi.
MONTGOMERY COUNTY			
Deep Creek	Brook	Green Lane, Rt. 29	4 mi.
Mill Creek	Brook	Bryn Mawr, Rt. 23	2 mi.
Perkiomen Valley Park Lake, Upper	Rainbow	Green Lane, Rt. 29	38 A.
NORTHAMPTON COUNTY			
Bertsch Creek	Brook	Walnutport, Rt. 145	3 mi.
Bushkill Creek	Brown, Rainbow	Easton, Rt. 22	16 mi.
Bushkill Creek, Little	Brown	Pen Argyl, Rt. 702	5 mi.
Catasauqua Creek	Brown, Rainbow	Northampton, Rt. 329	3 mi.
Hokendauqua Creek	Brown	Northampton, Rt. 329	6 mi.
Indian Creek	Brook	Danielsville, Rt. 93	4 mi.
Jacabus Creek	Brook	Portland, Rt. 611	3 mi.
Martins Creek	Brown	Bangor, Rt. 702	2 mi.
Martins Creek, Little	Brown	Martins Creek, Rt. 611	5 mi.
Monocacy Creek	Brook, Brown	Bethlehem, Rt. 22	3 mi.
Saucon Creek	Brook, Brown, Rainbow	Hellertown, Rt. 412	4 mi.
Waltz Creek	Brook	Ackermanville, Rt. 12	3 mi.
PERRY COUNTY			
Bixlers Run	Brook	Loysville, Rt. 274	3 mi.
Browns Run	Brook	Blain, Rt. 274	6 mi.
Buffalo Creek, Little	Brook	Newport, Rt. 34	4 mi.
Horse Valley Run	Brown, Rainbow	East Waterford, Rt. 75	5 mi.
Juniata Creek, Little	Brown	New Bloomfield, Rt. 34	10 mi.
Laurel Run	Brook	Landisburg, Rt. 850	13 mi.
Liberty Valley Run	Brook	Honey Grove, Rt. 75	5 mi.
McCabes Run	Brook	Landisburg, Rt. 850	4 mi.
Montour Run	Brook	Landisburg, Rt. 850	4 mi.
Panther Creek	Brook	Ickesburg, Rt. 74	2 mi.
Shaffer Run	Brook	Blain, Rt. 274	5 mi.
Shermans Creek	Brook, Rainbow	Blain, Rt. 274	8 mi.
PHILADELPHIA COUNTY			
Wissahickon Creek	Brown, Rainbow	Philadelphia, Rt. 422	5 mi.

PIKE COUNTY

Name of Stream	Specie stocked with	Reached at	Approx. Amt. of Water
Balliards Creek	Brook	Greeley, Rt. 37	2 mi.
Bushkill Creek, Big	Brown, Rainbow	Bushkill, Rt. 209	6 mi.
Bushkill Creek, Little	Brook	Milford, Rt. 6	11 mi.
Dingmans Creek	Brook	Dingmans Ferry, Rt. 209	6 mi.
Indian Ladder Creek	Brook	Dingmans Ferry, Rt. 209	4 mi.
Kellam Creek	Brook	Hawley, Rt. 6	2 mi.
Lackawaxen River	Brown, Rainbow	Lackawaxen, Rt. 237	12 mi.
Middle Branch Creek	Brook	Porters Lake, Rt. 402	3 mi.
Millrift Creek	Brook	Millrift, Rt. 963	3 mi.
Panther Brook	Brook	Shohola, Rt. 237	3 mi.
Raymondskill Creek	Brook, Brown	Milford, Rt. 6	9 mi.
Savantine Creek	Brook	Milford, Rt. 6	4 mi.
Saw Creek	Brook	Bushkill, Rt. 209	5 mi.
Sawkill Creek	Brook	Milford, Rt. 6	2 mi.
Shohola Creek	Brook, Brown, Rainbow	Shohola, Rt. 237	15 mi.
Twin Lakes Creek	Brook	Shohola, Rt. 237	4 mi.
Wallenpaupack Creek	Brown, Rainbow	Greentown, Rt. 507	6 mi.

POTTER COUNTY

Allegheny River	Brown	Coudersport, Rt. 6	8 mi.
Bailey Run	Brook	Wharton, Rt. 872	5 mi.
Bell Run	Brook	Shinglehouse, Rt. 44	2 mi.
Cowanesque River	Brown	Potter Brook, Rt. 49	3 mi.
Cross Fork Creek	Brook	Cross Forks, Rt. 144	8 mi.
Cushing Creek	Brook	Westpike, Rt. 6	7 mi.
Dingman Run	Brook	Coudersport, Rt. 6	6 mi.
Dingman Run, L. H. Br.	Brook	Coudersport, Rt. 6	3 mi.
Dodge Brook	Brook	Harrison Valley, Rt. 49	5 mi.
Dry Run	Brook	Sweden Valley, Rt. 6	4 mi.
Eleven Mile Creek	Brook	Millport, Rt. 44	6 mi.
Fishing Creek	Brook	Roulette, Rt. 6	3 mi.
Fishing Creek, E. Br.	Brook	Roulette, Rt. 6	3 mi.
Fishing Creek, W. Br.	Brook	Roulette, Rt. 6	4 mi.
Genessee River	Brown, Rainbow	Genesee, Rt. 449	5 mi.
Genesee River, Md. Br.	Brown, Rainbow	Gensee, Rt. 449	6 mi.
Genesee River, W. Br.	Brown, Rainbow	Genesee, Rt. 449	5 mi.
Kettle Creek	Brook	Cross Forks, Rt. 64	18 mi.
Kettle Creek, Little	Brook	Oleona, Rt. 44	4 mi.
Ludington Br.	Brook	Genesee, Rt. 449	3 mi.
Lyman Run	Brook	Germania, Station, Rt.	7 mi.
Mill Creek	Brown	Coudersport, Rt. 6	6 mi.
Moore Run, Big	Brook	Costello, Rt. 872	4 mi.
Nelson Run	Brook	Sweden Valley, Rt. 6	3 mi.
Nine Mile Run	Brook	Galeton, Rt. 6	4 mi.
Oswayo Creek	Brown	Shinglehouse, Rt. 44	7 mi.
Oswayo Creek, S. Br.	Brook	Coneville, Rt.	4 mi.
Pine Creek	Brown	Galeton, Rt. 6	7 mi.
Pine Creek, Genesee Fk.	Brook	Westpike, Rt. 6	7 mi.
Pine Creek, W. Br.	Brown	Galeton, Rt. 6	7 mi.
Portage Creek, E. Br.	Brook	Sizerville, Rt. 155	4 mi.
Portage Creek, W. Br.	Brook	Sizerville, Rt. 155	4 mi.
Reynolstown Branch	Brook	Ellisburg, Rt. 244	4 mi.
Sartwell Creek	Brook	Roulette, Rt. 6	4 mi.
Sinnemahoning Creek, First Fork	Brown	Wharton, Rt. 26	21 mi.
Sinnemahoning Creek, E. Fork of First Fork	Brook, Brown	Wharton, Rt. 872	20 mi.
Sinnemahoning Creek, S. Fork of First Fork	Brook	Costello, Rt. 872	4 mi.
Trout Run	Brook	Roulette, Rt. 6	3 mi.

SCHUYLKILL COUNTY

Bear Creek	Brook	Auburn, Rt. 895	7 mi.
Beaver Creek	Brook	Tuscarora, Rt. 209	2 mi.
Catawissa Creek, Little	Brown, Rainbow	Ringtown, Rt. 142	6 mi.
Deep Creek	Brown, Rainbow	Hegins, Rt. 125	7 mi.
Evening Branch	Brown	Pine Grove, Rt. 443	2 mi.
Fishing Creek	Brown	Pine Grove, Rt. 443	3 mi.
Fishing Creek, W. Br.	Brown	Pine Grove, Rt. 443	5 mi.
Lizard Creek	Brown, Rainbow	Andreas, Rt. 895	5 mi.
Locust Creek	Brown	Barnesville, Rt. 45	5 mi.
Pine Creek, trib. Mahantango Creek	Brook	Valley View, Rt. 25	5 mi.
Pine Creek, trib. Schuylkill River	Brook	Schuylkill Haven, Rt. 122	4 mi.
Pine Creek, trib. Schuylkill River, Little	Brook	Barnesville, Rt. 45	3 mi.
Neifert Creek	Brook	McAdoo, Rt. 29	2 mi.
Rattling Run	Brook	Hamburg, Rt. 22	2 mi.
Swatara Creek, Little	Brown, Rainbow	Freidensburg, Rt. 443	5 mi.

SNYDER COUNTY

Aigler Run	Brook	Beavertown, Rt. 522	1 mi.
Brickhart Run	Brook	Paxtonville, Rt. 639	2 mi.
Krepp Gap Run	Brook	Troxelville, Rt. 929	2 mi.
Kuhn-Hooven Run	Brook	Beavertown, Rt. 522	1 mi.
Mahantango Creek, N. Br.	Brook, Rainbow	Mt. Pleasant Mills, Rt. 35	5 mi.
Mahantango Creek, W. Br.	Rainbow	Richfield, Rt. 35	1 mi.
Middle Creek, N. Br.	Brown	Troxelville, Rt. 929	6 mi.
Mitchells Run	Brook	Beavertown, Rt. 522	1 mi.
Swift Run	Brook	Troxelville, Rt. 929	4 mi.

SOMERSET COUNTY

Name of Stream	Specie stocked with	Reached at	Approx Amt. o Wate
Beaver Dam Creek, trib. Stony Creek	Brown	Stoyestown, Rt. 30	5 mi
Beaverdam Run, trib. Quemahoning Creek	Brown	Boswell, Rt. 601	3 mi
Beaverdam Run, trib. Dark Shade Creek	Brook, Rainbow	Central City, Rt. 160	4 mi
Bens Creek, South Fork	Brook	Ferndale, Rt. 219	5 mi
Blue Hole Run	Brook	New Lexington, Rt. 53	5 mi
Brush Creek	Brook	Berlin, Rt. 219	7 mi
Clear Run	Brook	Bakerville, Rt. 31	4 mi
Clear Shade Creek	Brown, Rainbow	Windber, Rt. 56	8 mi
Drake Run	Brook, Rainbow	Confluence, Rt. 53	3 mi
Flaugherty Creek	Brown	Meyersdale, Rt. 219	4 mi
Harbaugh Run	Brook	Scullton, Rt. 653	2 mi
Iser Run	Brook	Markleton, Rt.	3 mi
Jones Mill Run	Brook	Bakerville, Rt. 31	1 mi
Juniata River, Raystown Branch	Brook	New Baltimore, Rt. 31	5 mi
Kooser Lake	Rainbow	Bakerville, Rt. 31	5 A.
Laurel Run	Brown	Berlin, Rt. 219	6 mi
Laurel Hill Creek	Brown, Rainbow	Bakerville, Rt. 31	10 mi
McClintock Run	Brook	Confluence, Rt. 53	2 mi
Piney Run	Brown	Central City, Rt. 160	3 mi
Piney Run, Big	Brown	Boynton, Rt. 219	4 mi
Roaring Run	Brook, Brown	Jennertown, Rt. 219	4 mi
Sandy Run	Brook	Scullton, Rt. 653	5 mi
Shafer Run	Brook	Bakerville, Rt. 31	4 mi
Shaffers Run	Brook	Fairhope, Rt. 288	4 mi
Stony Creek	Brown, Rainbow	Stoyestown, Rt. 30	6 mi
Tub Mill Run	Brook	Sailsbury, Rt. 219	4 mi
Whites Creek	Brown, Rainbow	Confluence, Rt. 53	6 mi
Wills Creek	Brown, Rainbow	Mance, Rt.	6 m

SULLIVAN COUNTY

Black Creek	Brook	Cherry Mills, Rt. 87	4 m
Double Run	Brook	Eagles Mere, Rt. 42	1 m
Elk Creek	Brown	Hillsgrove, Rt. 87	6 m
Elk Lick Run	Brook	Nordomont, Rt. 154	1 m
Fishing Creek, E. Br.	Brook	Benton, Rt. 115	5 m
Fishing Creek, W. Br.	Brook	Benton, Rt. 115	5 m
Hogland Branch	Brown	Hillsgrove, Rt. 87	5 m
Lewis Creek	Brook	Sonestown, Rt. 222	4 m
Lick Creek	Brook	Forksville, Rt. 154	4 m
Loyalsock Creek	Brown, Rainbow	Forksville, Rt. 154	10 m
Loyalsock Creek, Little	Brown, Rainbow	Forksville, Rt. 154	10 m
Mehoopany Crk., N. Br.	Brook	Calley, Rt. 87	3 m
Mill Creek	Brook	Hillsgrove, Rt. 87	5 m
Muncy Creek	Brown, Rainbow	Nordomont, Route 154	10 m
Pigeon Creek	Brook	Lopez, Rt. 487	2 m
Pole Bridge Run	Brook	Laports, Rt. 220	3 m
Rock Run	Brook	Muncy, Rt. 220	2 m
Sullivan Run	Brook	Benton, Rt. 115	1 m

SUSQUEHANNA COUNTY

Butler Creek	Brook	Gibson, Rt. 547	3 m
Gaylord Creek	Brook	Rushville, Rt. 106	7 m
Gibson Creek	Brook	Gibson, Rt. 547	4 m
Harding Creek	Brook	Herrick Centre, Rt. 73	4 m
Harmony Creek	Brown	New Milford, Rt. 11	5 m
Lackawanna Creek, E. Br.	Brook	Herrick Centre, Route 73	5 m
Lackawanna Creek, W. Br.	Brook	Herrick Centre, Route 73	5 m
Nine Partners Creek	Brook	Lenox, Rt. 106	4 m
Riley Creek	Brook	Meshoppen, Rt. 6	3 m
Starrucca Creek	Brook, Brown, Rainbow	Lanesboro, Rt. 70	10 m
Tunkhannock Creek	Brown, Rainbow	Gelatt, Rt. 92	10 m
Tunkhannock Creek, E. Br.	Brown	Royal, Rt. 106	5 m

TIOGA COUNTY

Asaph Run	Brown	Ansonia, Rt. 6	10 m
Bailey Creek	Brook	Roseville, Rt. 549	4 m
Blacks Creek	Brook	Liberty, Rt. 15	3 m
Blockhouse Run	Brown	Liberty, Rt. 15	2 m
Cedar Run	Brown	Cedar Run, Rt. 893	5 m
Elk Run	Brook	Galeton, Rt. 6	4 m
Four Mile Run	Brook	Ansonia, Rt. 6	3 m
Kettle Creek	Brook	Gaines, Rt. 6	3 m
Long Run, trib. Babbs Creek	Brook	Morris, Rt. 84	2 m
Long Run, trib. Pine Creek	Brook	Davis, Rt. 349	5 m
Mill Creek	Brown	Mansfield, Rt. 6	7 m
Mill Creek, W. Br.	Brook	Roaring Branch, Rt. 14	1 m
Phoenix Run	Brook	Galeton, Rt. 6	3 m
Pine Creek	Brown, Rainbow	Galeton, Rt. 6	9 m
Sand Run	Brook	Arnot, Rt. 15	5 m
Stony Fork Creek	Brook	Draper, Rt. 960	4 m
Straight Run	Brook	Marsh Creek, Rt. 6	3 m
Straight Run, Left Br.	Brook	Marsh Creek, Rt. 6	6 m
Straight Run, Right Br.	Brook	Marsh Creek, Rt. 6	2 m
Tioga River	Brown	Blossburg, Rt. 15	10 m

UNION COUNTY

Name of Stream	Specie stocked with	Reached at	Approx. Amt. of Water
Bear Run	Brook	Laureiton, Rt. 888	3 mi.
Beaver Run	Brook	Vicksburg, Rt. 45	6 mi.
Buffalo Creek	Brown	Mifflinburg, Rt. 45	9 mi.
Buffalo Creek, Little	Brook	West Milton, Rt. 404	4 mi.
Buffalo Creek, N. Br.	Brown	Mifflinburg, Rt. 45	7 mi.
Cherry Run	Brook	Laureiton, Rt. 888	3 mi.
Halfway Dam	Rainbow	Livonia, Rt. 95	7 A.
Halfway Run	Brook	Mifflinburg, Rt. 45	4 mi.
Laurel Run	Brook	Laureiton, Rt. 888	6 mi.
Penns Creek	Brown, Rainbow	Laureiton, Rt. 888	8 mi.
Rapid Run	Brook	Cowan, Rt. 95	11 mi.
Spring Creek	Brown	Elimsport, Rt. 44	3 mi.
Spruce Run	Brook	Mifflinburg, Rt. 45	7 mi.
Weiker Run	Brook	Laureiton, Rt. 888	6 mi.
White Deer Creek	Brown	White Deer, Rt. 975	17 mi.

VENANGO COUNTY

Cherry Run	Brook	Pleasantville, Rt. 27	3 mi.
Hemlock Creek	Brook	Venus, Rt. 157	2 mi.
Horse Creek	Brook	Oil City, Rt. 8	3 mi.
Mill Creek	Brook	Emienton, Rt. 38	3 mi.
Pithole Creek	Brown, Rainbow	Pleasantville, Rt. 27	7 mi.
Pithole Creek, West	Brook, Rainbow	Pleasantville, Rt. 27	1 mi.
Porkey Creek	Brook	President, Rt. 62	3 mi.
Prather Creek	Brook	Cooperstown, Rt. 427	3 mi.
Sandy Creek, East	Brown	Oil City, Rt. 8	3 mi.
Sandy Creek, Little	Brown	Polk, Rt. 62	6 mi.
Sandy Creek, S. Br.	Brown	Raymilton, Rt. 955	4 mi.
Scrubgrass Creek	Brown, Rainbow	Kennerdell, Rt. 965	6 mi.
Scrubgrass Creek, Little	Brown, Rainbow	Emienton, Rt. 208	4 mi.
Scrubgrass Creek, Little, North Fork	Brook, Rainbow	Emienton, Rt. 208	2 mi.
Scrubgrass Creek, Little, South Fork	Brook, Rainbow	Emienton, Rt. 208	2 mi.
Slippery Rock Creek	Brook	Harrisville, Rt. 8	2 mi.
Sugar Creek	Brown, Rainbow	Cooperstown, Rt. 427	6 mi.
Sugar Creek, E. Br.	Brown	Cooperstown, Rt. 427	10 mi.
Two Mile Run, Upper	Brown, Rainbow	Franklin, Rt. 8	8 mi.

WARREN COUNTY

Ben Jeorge Creek	Brook	Tidioute, Rt. 127	5 mi.
Blue Eye Creek	Brook	Garland, Rt. 127	3 mi.
Brokenstraw Creek	Brown, Rainbow	Spring Creek, Rt. 177	5 mi.
Brokenstraw Creek, Little	Brook, Rainbow	Pittsfield, Rt. 6	6 mi.
Caldwell Creek	Brown	Grand Valley, Rt. 27	5 mi.
Caldwell Creek, W. Br.	Brown	Grand Valley, Rt. 27	4 mi.
Coffee Creek	Brook	Columbus, Rt. 957	4 mi.
Hemlock Run	Brook	Glade, Rt. 6	3 mi.
Hickory Creek, West	Brown	West Hickory, Rt. 127	2 mi.
Lamb Run	Brook	Tidioute, Rt. 127	4 mi.
McGuire Run	Brook	Tidioute, Rt. 127	5 mi.
Perry McGee Run	Brook	Tidioute, Rt. 127	1 mi.
Pheips Creek	Brook	Columbus, Rt. 957	3 mi.
Pine Creek	Brook, Brown, Rainbow	Enterprise, Rt. 27	7 mi.
Rock Hollow Run	Brook	Tidioute, Rt. 127	4 mi.
Spring Creek	Brown, Rainbow	Spring Creek, Rt. 77	6 mi.
Spring Creek, E. Br.	Brown, Rainbow	Spring Creek, Rt. 77	5 mi.
Spring Creek, N.W.Br.	Brook	West Spring Creek, Rt. 77	2 mi.
Tidioute Creek	Brook	Tidioute, Rt. 127	4 mi.
Wilson Run	Brook	Tidioute, Rt. 127	4 mi.

WASHINGTON COUNTY

Name of Stream	Specie stocked with	Reached at	Approx Amt of Water
Aunt Clara Fork	Brown, Rainbow	Florence, Rt. 22	4 mi
Kings Creek	Brown, Rainbow	Florence, Rt. 22	4 mi

WAYNE COUNTY

Alder Marsh Creek	Brook	Cold Springs, Rt. 371	2 mi
Butternut Creek	Brown	Hamlin, Rt. 90	4 mi.
Calkins Creek, S. Br.	Brook	Milanville, Rt.	5 mi
Dyberry Creek	Brown, Rainbow	Honesdale, Rt. 6	7 mi
Dyberry Creek, E. Br.	Brook	Honesdale, Rt. 6	6 mi
Dyberry Creek, Middle Br.	Brook	Whites Valley, Rt. 670	1 mi.
Dyberry Creek, W. Br.	Brook	Dyberry, Rt. 90	6 mi.
Johnson Creek	Brook	Pleasant Mount, Rt. 371	8 mi.
Lackawaxen River, W. Br.	Brown, Rainbow	Pleasant Mount, Rt. 371	7 mi.
Lehigh River	Brook	Gouldsboro, Rt. 507	4 mi
Wallenpaupack Creek	Brown, Rainbow	Greentown, Rt. 507	1 mi.
Wallenpaupack Creek, W. Br.	Brown, Rainbow	Hamlin, Rt. 90	6 mi.

WESTMORELAND COUNTY

Indian Creek	Brown	Jones Mills, Rt. 31	2 mi.
Jacob's Creek	Brown, Rainbow	Laurelville, Rt. 31	8 mi.
Linn Run	Brown, Rainbow	Rector, Rt. 381	3 mi.
Little Pucketa Creek	Brook	New Kensington, Rt. 56	4 mi.
Loyalhanna Creek	Brown	Ligonier, Rt. 30	6 mi.
Mill Creek	Brook	Waterford, Rt. 711	2 mi.
Mill Creek, Middle Fork	Brook	Waterford, Rt. 711	2 mi.
Mill Creek, N. Fork	Brook	Waterford, Rt. 711	2 mi.
Mill Creek, S. Fork	Brook	Waterford, Rt. 711	2 mi.
Powder Mill Run, trib. Baldwin Run	Brook	New Florence, Rt. 711	2 mi.
Powder Mill Run, trib. Loyalhanna Creek	Brook	Ligonier, Rt. 30	2 mi.
Roaring Run	Brook	Jones Mills, Rt. 31	3 mi.
Shannon Run	Brook	New Florence, Rt. 711	3 mi.
Tub Mill Run	Brown, Rainbow	New Florence, Rt. 711	4 mi.

WYOMING COUNTY

Beaver Run	Brook	Noxen, Rt. 29	3 mi.
Bowmans Creek	Brown, Rainbow	Noxen, Rt. 29	8 mi.
Mehoopany Creek	Brown, Rainbow	Forkston, Rt. 87	5 mi.
Mehoopany Creek, N. Br.	Brook, Rainbow	Forkston, Rt. 87	7 mi.
Meshoppen Creek, W. Br.	Brook	Meshoppen, Rt. 309	3 mi.
Riley Creek	Brook	Auburn Centre, Rt. 267	1 mi.

YORK COUNTY

Beaver Run	Brook	Windsor, Rt. 624	4 mi.
Blymire Hollow Run	Brook	Wintertown, Rt. 24	4 mi.
Fishing Creek, trib. Muddy Creek	Brook	Castle Finn, Rt. 74	3 mi.
Fishing Creek, trib. Susquehanna River	Brown	Windsor, Rt. 624	4 mi.
Furnace Run	Brook	York Furnace, Rt. 124	2 mi.
Haideman Pond	Rainbow	Hanover, Rt. 94	8 A.
Leibs Creek	Brook	Stewartstown, Rt. 24	3 mi.
Orson Run	Brook	Airville, Rt. 74	3 mi.
Otter Creek	Brown, Rainbow	New Bridgeville, Rt. 124	3 mi.
Rambo Run	Brook	Riniey, Rt. 24	3 mi.
Rehmayer Hollow Run	Brook	Jacobus, Rt. 111	2 mi.
Toms Run	Brook	Airville, Rt. 74	3 mi.
Wallace Run	Brook	Kyleville, Rt. 74	4 mi.

THE BROWN TROUT

(*From page 8*)

ike the "Pal" and should be 5 feet
r more in length.

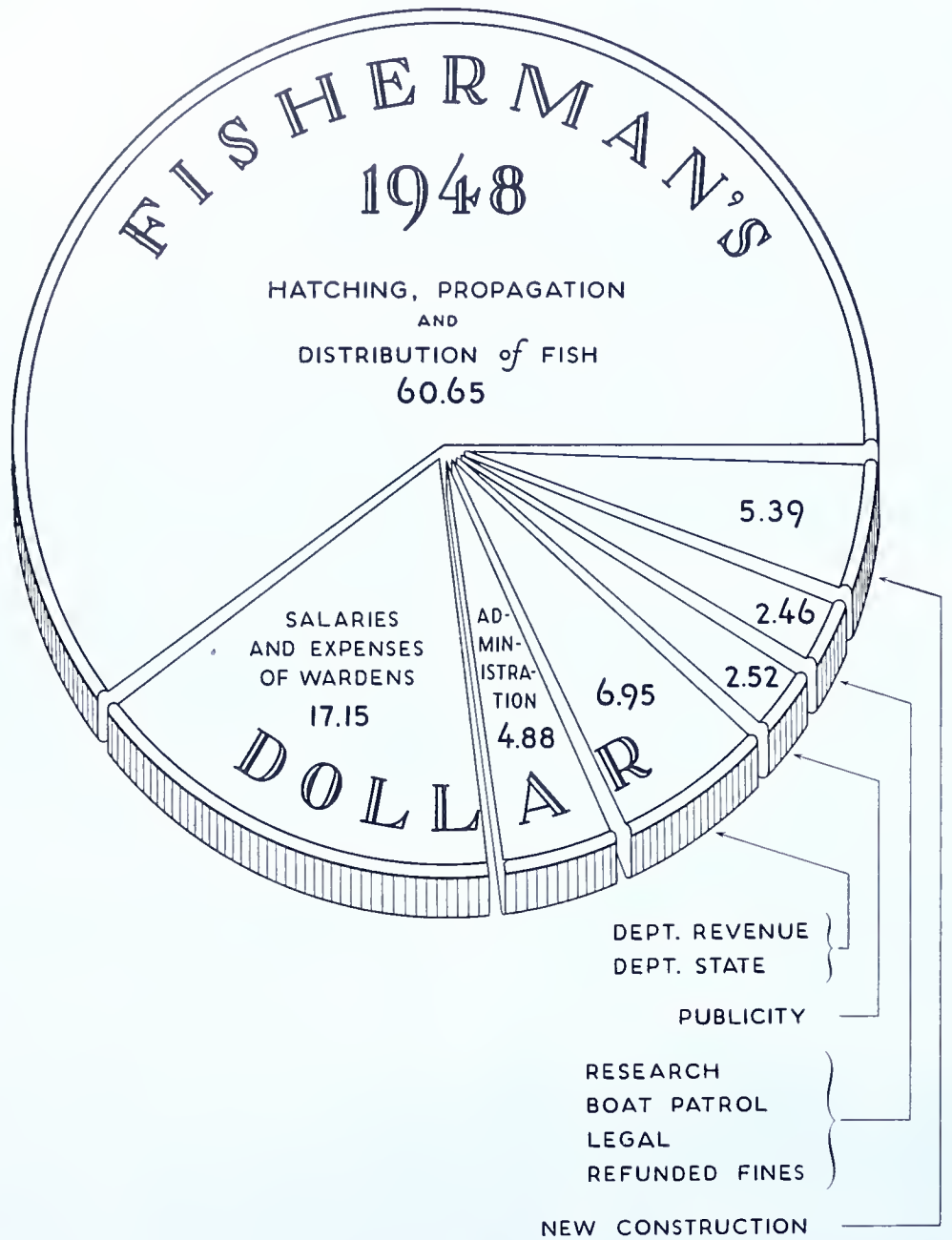
A light weight "fast" level-winding
eel like the "Pal" should be used, pre-
erably one with a cork arbor that will
old at least 50 yards of 9 to 12-pound
est silk or nylon line. Between the
nd of the line and the lure, a 3 or 4
oot light nylon or gut leader is desir-
ble. While the rods already men-
ioned are all suitable for still-fishing,
t should be borne in mind that light
ction fly rods should not be punished by casting heavy minnows and worms, so due care should be used. Where large baits are to be cast, and also where distance is necessary, a rod with more backbone is to be preferred, such as one with "power plus" action in a 9 foot length. This rod is built on a 2¾ ferrule and weighs a shade over 6 ounces. It should be used with an HCH or GBG tapered line or a D or C level line.

To those who have been used to seeing the brown trout referred to as *Salmo fario* rather than *Salmo trutta*, a word of explanation may not be amiss. Recently, European authorities have changed their former ideas about the classification of the brown trout and now regard *fario* and *trutta* as sub species of one another.

The British sea trout is *Salmo trutta trutta*. For our trout, either *Salmo trutta* or *Salmo trutta ferio* would be correct, but the advantage of keeping it a binominal favors its being referred to as *Salmo trutta*. Regardless of what it is called, the brown trout will not be too concerned over it, nor will anglers admire this gladiator one whit less.

One robin does not necessarily make a spring . . . but one lark can mean a fall.

Almost any girl can be as pretty as a picture if she has a nice frame.



FISH STOCKED IN 1948

The final report of the production of fish and the numbers stocked in the open fishing waters in Pennsylvania during the year 1948 has just been announced by the Board of Fish Commissioners.

The following is the official report of the Board of fish placed in the waters open to public fishing in Pennsylvania.

Species	*Approx. Size*	*Number*	*Total*
Brook, Brown and Rainbow Trout	7″ to 20″	2,113,843	
Black Bass	1″ to 12″	595,218	
Catfish	5″ to 12″	271,638	
Bream	3″ to 8″	134,432	
Frogs (Embryo)		551,850	
Carp	10″ to 20″	108,505	
Yellow Perch	3″ to 8″	150,668	
Suckers	3″ to 5″	1,162	
Minnows	1½″ to 6″	93,103	
Pickerel	7″ to 18″	2,907	
Calico Bass	7″ to 11″	6,630	
Pike Perch	10″ to 30″	2,124	
Goldfish		68	4,032,148
Fry and Fingerling			
Trout .....Fingerling		2,295,500	
Yellow Perch .....Fry		233,466,000	
Pike Perch .....Fry		610,000	
Cisco .....Fry		11,500,000	
White Fish .....Fry		9,500,000	257,371,500
Grand Total			261,403,648

FINANCIAL STATEMENT
BOARD OF FISH COMMISSIONERS

CALENDAR YEAR 1948

BALANCE—January 1, 1948

Cash		$474,344.95
U. S. Treasury Certificates		109,000.00
		$583,344.95

RECEIPTS—1948

Resident Fishing Licenses	$1,182,900.04	
Non Resident Fishing Licenses	54,318.11	
Tourist's Fishing Licenses	15,014.50	
Motor Boat Licenses	33,010.25	
Eel Chute Licenses ....Deduct credit	(210.00)	cr
Lake Erie Licenses	2,476.00	
Commercial Hatchery Licenses	1,345.00	
Fish Law Fines	21,035.00	
Motor Boat Fines	1,482.00	
Contributions for Restocking Streams	12,750.00	
Sale of Publications	6,256.95	
Sale of Unserviceable Property	634.80	
Interest	4,945.60	
Refunds not Credited to Allocation	2.25	
Miscellaneous	223.21	
		$1,339,183.71
Total Funds Available		$1,922,528.66

EXPENDITURES—1948

Administration

Salaries	$24,015.00
Wages	6,354.58
Fees	113.50
Printing, Binding & Stationery	14,715.60
Materials & Supplies	423.76
Traveling Expenses	1,428.15
Motor Vehicle Supplies & Repairs	567.78
Freight, Express & Cartage	131.42
Postage	1,068.50
Telephone & Telegraph	1,316.62
Contracted Repairs	49.05
Rent of Real Estate	26.08
Rent of Equipment	12.60
Insurance, Surety & Fidelity Bonds	194.42
Other Maintenance Services & Expense	102.73
Motor Vehicles	1,705.00
Equipment & Machinery	713.96
Total	$52,938.75

Warden Service

Salaries	$96,650.50
Wages	15,736.43
Printing, Binding & Stationery	13.40
Materials & Supplies	2,785.20
Traveling Expenses	66,172.09
Telephone & Telegraph	3,074.34
Contracted Repairs	32.31
Rent of Real Estate	21.00
Insurance, Surety & Fidelity Bonds	751.90
Equipment & Machinery	540.23
Total	$185,777.40

Field Service

Salaries	$14,024.00
Wages	18,028.38
Printing, Binding & Stationery	442.19
Materials & Supplies	3,470.17
Traveling Expenses	4,677.38
Motor Vehicle Supplies & Repairs	1,782.58
Telephone & Telegraph	1,431.57
Contracted Repairs	15.20
Rent of Equipment	60.00
Insurance, Surety & Fidelity Bonds	168.26
Equipment & Machinery	366.90
Total	$44,466.63

Hatching Service

Salaries	$176,872.75
Wages	128,967.83
Printing, Binding & Stationery	294.71
Food & Forage	190,192.28
Materials & Supplies	37,430.26
Traveling Expenses	8,077.13
Motor Vehicle Supplies & Repairs	27,149.98
Freight, Express & Cartage	459.02
Postage	898.30
Telephone & Telegraph	1,901.83
Light, Heat, Power, Water etc.	29,982.95
Contracted Repairs	1,464.31
Rent of Real Estate	1,187.00
Rent of Equipment	585.59
Insurance, Surety & Fidelity Bonds	1,517.18
Equipment & Machinery	3,955.19
Stores Acct.	1,819.27
Total	$612,755.58

Education and Publicity

Salaries	$4,628.50
Wages	3,982.51
Fees	2,656.80
Printing, Binding & Stationery	13,186.75
Materials & Supplies	403.40
Traveling Expenses	1,243.41
Postage	600.00
Rent of Real Estate	195.00
Insurance, Surety & Fidelity Bonds	21.65
Other Maintenance Services & Expenses	6.27
Equipment & Machinery	377.50
Total	$27,307.79

Research

Salaries	$8,344.50
Wages	7,402.08
Printing, Binding & Stationery	263.20
Materials & Supplies	2,060.22
Traveling Expenses	2,261.42
Contracted Repairs	51.06
Insurance, Surety & Fidelity Bonds	46.34
Equipment & Machinery	680.01
Subsidies, Grants, Etc.	250.00
Total	$21,358.83

Construction (Pymatuning Sanctuary)

Wages	$25,473.07
Materials & Supplies	26,281.11
Motor Vehicle Supplies & Repairs	2,462.07
Contracted Repairs	1,618.53
Rent of Equipment	29.16
Equipment & Machinery	2,600.00
Total	$58,463.94

Boat Patrol Service

Materials & Supplies	$112.66
Insurance, Surety & Fidelity Bonds	227.93
Equipment & Machinery	4,955.00
Total	5,295.59

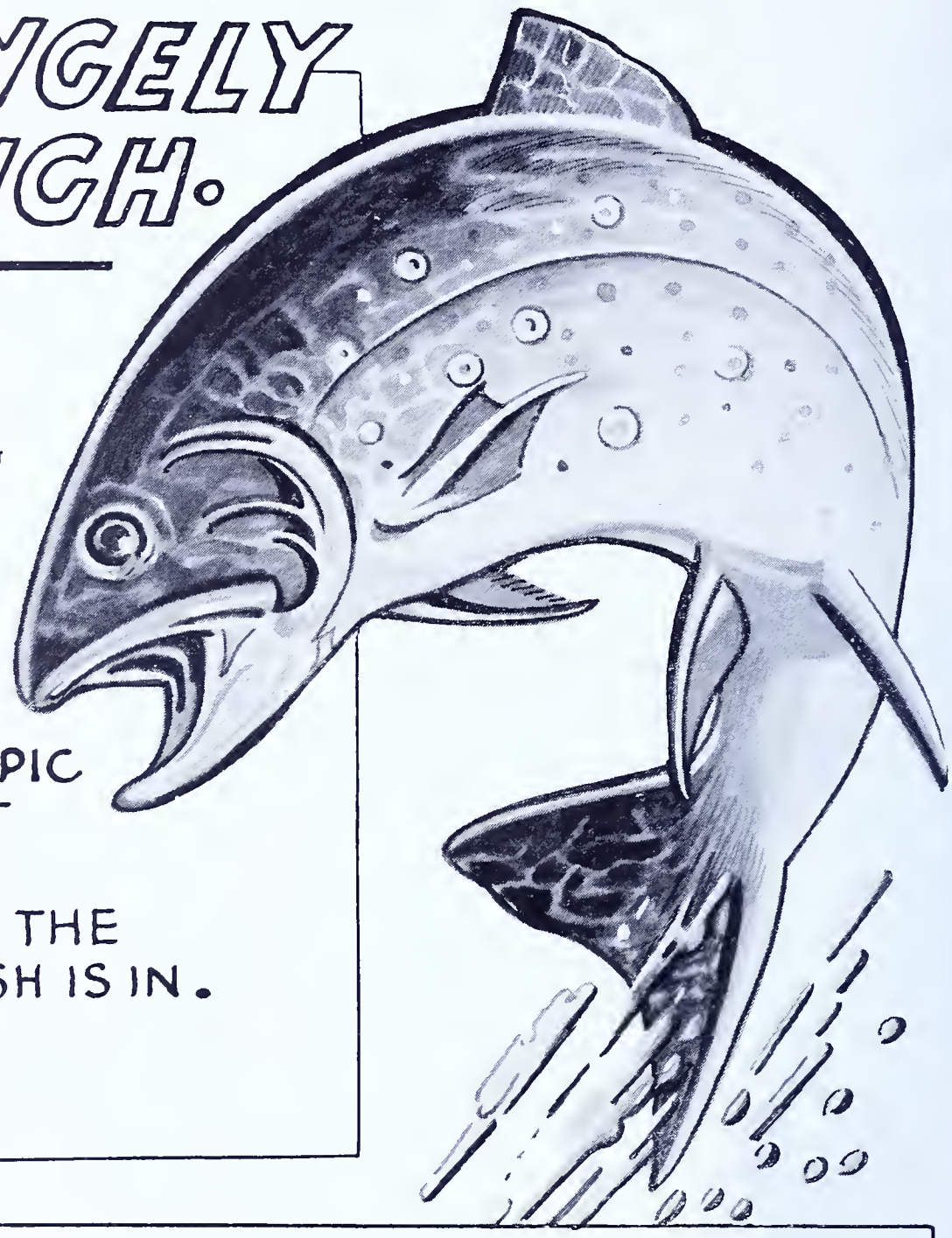
By Pennsylvania Department of Revenue (Bureau of Miscellaneous Licenses)	58,953.64	
By Department of State (State Employes Retirement Board)	16,397.50	
Refunds and Repayments of Receipts	25.00	
		$1,083,740 65
BALANCE—December 31, 1948		*$838,788.01

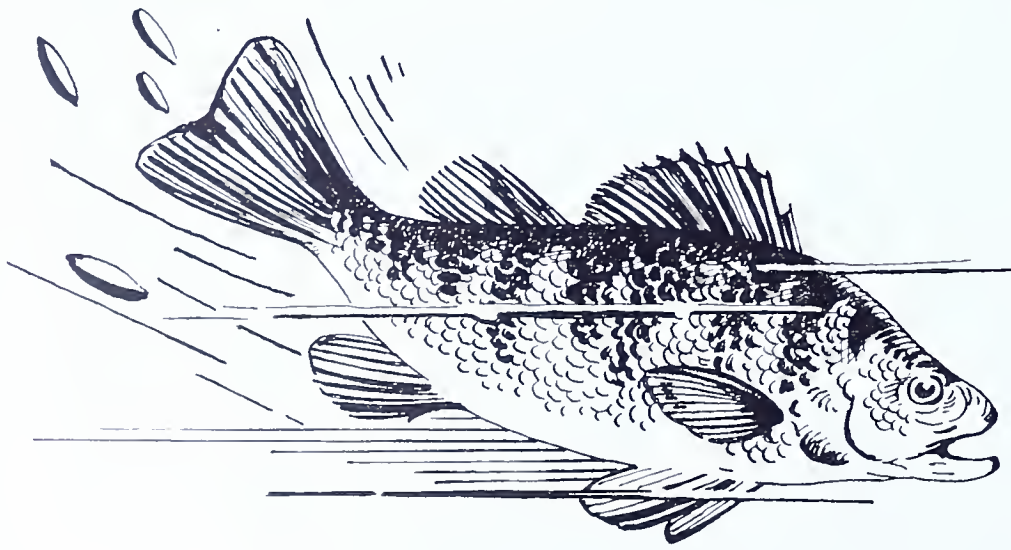
* $729,788.01 Cash
109,000.00 U. S. Treasury Certificates

$838,788.01

STRANGELY ENOUGH.

THE THIN LINE THAT RUNS ALONG THE SIDES OF ALL FISH IS CALLED THE MEDIAN LINE. THIS LINE HAS MICROSCOPIC ORGANS THAT DETECT THE PRESSURE OF THE WATER THE FISH IS IN.





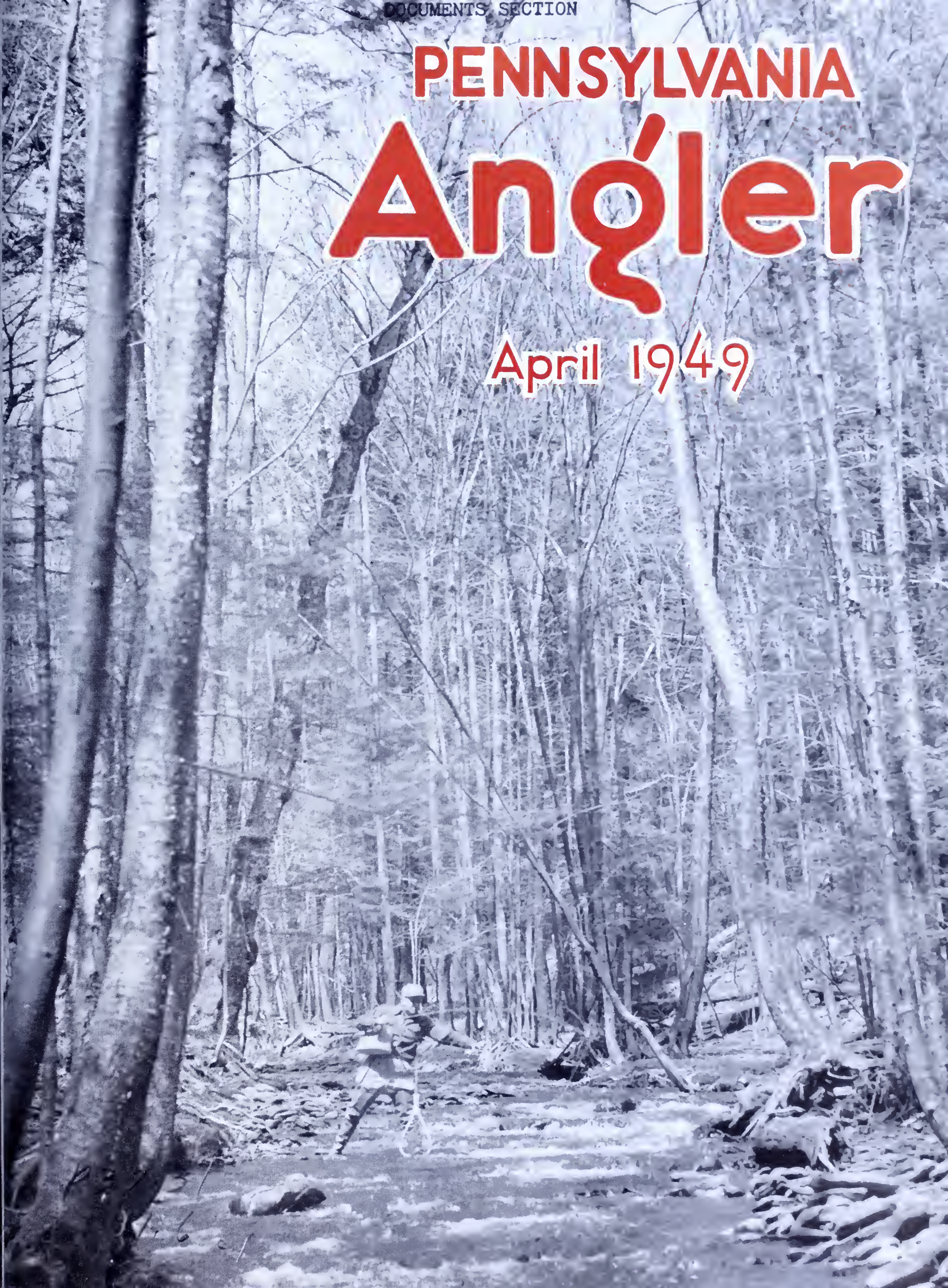
MOST FRESH WATER FISH CAN SWIM ABOUT SEVEN MILES AN HOUR.

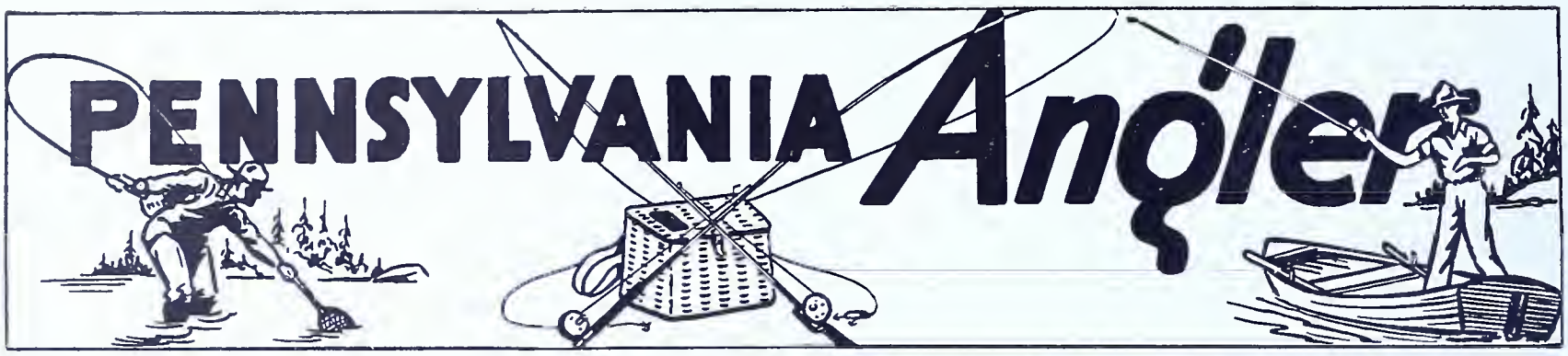
OWEN PENFIELD FOX.

DOCUMENTS SECTION

PENNSYLVANIA Angler

April 1949





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★

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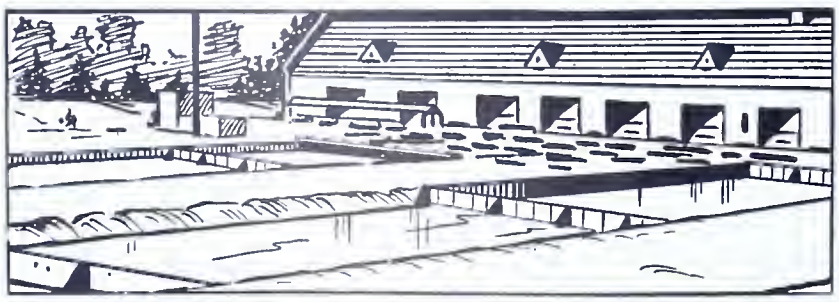
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COMMONWEALTH OF PENNSYLVANIA
BOARD OF FISH COMMISSIONERS
HARRISBURG, PA.

The Angler

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The Cover . . .

does credit to Hal Harrison's good photography, the shot was taken on Kitchen Creek in Luzerne County, a typical Pennsylvania mountain brook trout stream.

Let's Be Consistent

AN AVERAGE Citizen was walking to his office one morning. His way led past the hardware store and he stopped to see what was new in the sporting goods display. Happening to glance into the store, he saw a lounger snatch a pocketknife from a rack and conceal it in his coat pocket.

The Average Citizen was outraged; bustling into the store he called the proprietor and told him about it, pointing out the culprit who lingered by the counter. Mr. Citizen and the owner accosted the thief and held him until a policeman could be called. In jig-time the scoundrel was on his way to jail and the Average Citizen was receiving the owner's thanks for his prompt, public-spirited action.

Later that morning, a friend called on the Average Citizen. Both were ardent quail hunters and the talk soon turned to the late quail season. The friend passed on some information about a certain locality where, he said, a mutual acquaintance had reported getting his limit easily one day. The Average Citizen laughed.

"You don't know how Jim got his limit so fast? He slipped in on the refuge. And it wasn't just a limit—it was quite a bit over."

"No!" exclaimed the friend. "That's hard to believe. Are you sure?"

"I ought to know," said the Average Citizen. "I watched him do it."

"But that's breaking every law in the book! Why didn't you tell the game warden?"

Mr. Citizen glared. "Think I'd tell on a man? Besides, it's the warden's job to catch him—it's none of my business."

They said goodby, then, and the Average Citizen returned to work. When he got home that night, and sat down to dinner, he regaled his family with the events of the day, emphasizing—with conscious virtue—how he had twice demonstrated his code of ethics. Mrs. Citizen applauded dutifully, but 14-year-old Joe was silent.

"What's the matter, Joe?" his father asked, with heavy humor. "Don't you approve of my conduct?"

"I—I guess so," Joe said, squirming, "but—Dad, if you helped arrest the man in the store, why didn't you help the warden? Wasn't Mr. Jim breaking the law, too?"

"You don't understand, son," was the indulgent reply. "The man was *stealing*. Jim was just outsmarting the warden."

Joe slipped out of his chair. His face was red. "Mr. Jim was stealing, too!" he declared. "I want to go hunting when I grow up, and so does Jim Junior. If his father and other fathers break the laws and kill more'n they oughta, there won't *be* anything for us kids to hunt. He *was* stealing—from us!" And then Joe ran from the room.

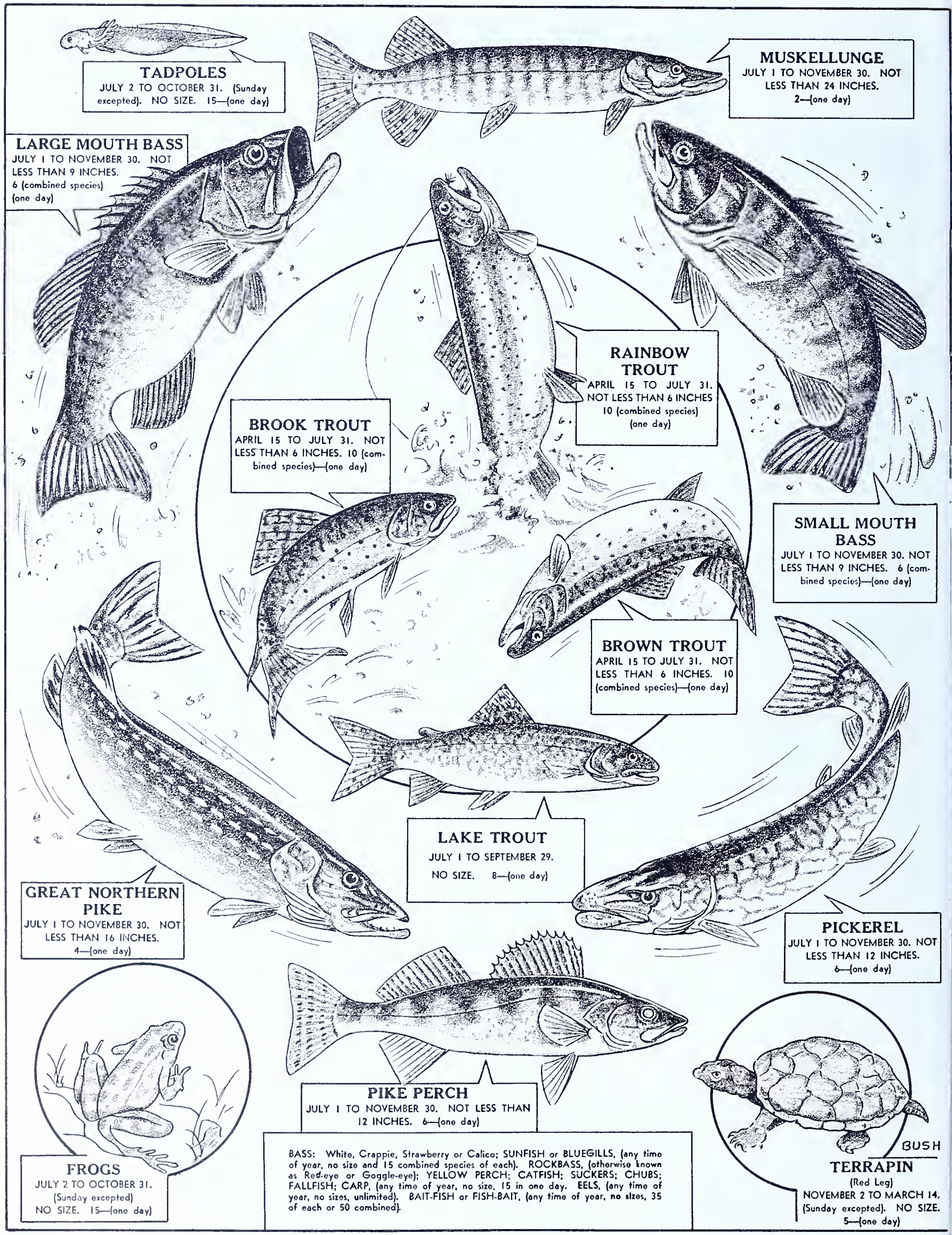
The Average Citizen, his mouth open, stared after him for a moment and then picked up his fork. "That boy!" he exclaimed. "I can't figure him out. Saying Jim was stealing those quail; arguing that I should have told on a fellow-sportsman!"

Mrs. Citizen didn't look dutiful now. "Well, he *was* breaking a law!" she snapped. "That *isn't* just his game, but Joe's, too. What's the difference if it's quail or a jack-knife?" And she walked out also.

The Average Citizen looked hurt. "Women!" he growled. "Kids! You can't reason with 'em. They're so *inconsistent!*"

W. O. N.—Missouri Conservationist

1949 Season, Size and Creel Limits on Game Fishes, Etc. in Pennsylvania



TADPOLES
JULY 2 TO OCTOBER 31. (Sunday excepted). NO SIZE. 15—(one day)

MUSKELLUNGE
JULY 1 TO NOVEMBER 30. NOT LESS THAN 24 INCHES.
2—(one day)

LARGE MOUTH BASS
JULY 1 TO NOVEMBER 30. NOT LESS THAN 9 INCHES.
6 (combined species)
(one day)

RAINBOW TROUT
APRIL 15 TO JULY 31. NOT LESS THAN 6 INCHES
10 (combined species)
(one day)

BROOK TROUT
APRIL 15 TO JULY 31. NOT LESS THAN 6 INCHES. 10 (combined species)—(one day)

SMALL MOUTH BASS
JULY 1 TO NOVEMBER 30. NOT LESS THAN 9 INCHES. 6 (combined species)—(one day)

BROWN TROUT
APRIL 15 TO JULY 31. NOT LESS THAN 6 INCHES. 10 (combined species)—(one day)

LAKE TROUT
JULY 1 TO SEPTEMBER 29.
NO SIZE. 8—(one day)

GREAT NORTHERN PIKE
JULY 1 TO NOVEMBER 30. NOT LESS THAN 16 INCHES.
4—(one day)

PICKEREL
JULY 1 TO NOVEMBER 30. NOT LESS THAN 12 INCHES.
6—(one day)

PIKE PERCH
JULY 1 TO NOVEMBER 30. NOT LESS THAN 12 INCHES. 6—(one day)

FROGS
JULY 2 TO OCTOBER 31.
(Sunday excepted)
NO SIZE. 15—(one day)

BASS: White, Crappie, Strawberry or Calico; SUNFISH or BLUEGILLS, (any time of year, no size and 15 combined species of each). ROCKBASS, (otherwise known as Red-eye or Goggle-eye); YELLOW PERCH; CATFISH; SUCKERS; CHUBS; FALLFISH; CARP, (any time of year, no size, 15 in one day. EELS, (any time of year, no sizes, unlimited). BAIT-FISH or FISH-BAIT, (any time of year, no sizes, 35 of each or 50 combined).

BUSH

TERRAPIN
(Red Leg)
NOVEMBER 2 TO MARCH 14. (Sunday excepted). NO SIZE.
5—(one day)

Heddon Fish Flashes

Edited by

LOU S. CAINE



THE BROOK TROUT

MUCH of the glory and romance associated with the trout family can be credited to that speckled beauty, the brook trout. Dear to the heart of the purist fly fisherman, the "brookie" is a choice prize, either streaking about at the end of a taut leader—or sizzling in the skillet.

No. 1 on the hit parade of fly casters, the brook trout holds the same spot here that the bass occupies among plug casters. Perhaps it is due to that peculiarity which makes the brook trout seek out the less frequented waters.

Nearly every brook trout fan has his "secret" good holes, far off the beaten path, which he will divulge to none but his bosom buddies. Such an angler will toil through miles of tough cover to reach his haven, considering two or three modest-size specimens as ample reward for his pains.

Due to its varied diet and lusty appetite, the brook trout—when taken from fast, cold waters—offers light-tackle anglers sport on the highest plane. Beautiful, game, speedy, rugged and delicately delicious to eat—the "brookie" deserves every measure of its esteem.

The specific name—*fontinalis*—means "living in springs." The following colloquial names are derved mostly from appearance and habitat: Eastern brook trout, speckled trout, square-tail, trout, brookie, mountain trout, native trout and coaster.

Strange but true, the brook trout is actually not a trout but a charr—due to the bone structure of its mouth which differs from that of a true member of the trout family. However, in every other department the brook trout embodies the habits of the trout clan—especially to the fly rod gentry.

While brilliantly and beautifully colored, the brook trout is not considered gaudy. While on other trout the markings are darker than the background, those on the brook trout are lighter than the dark-olive background. These light spots are vermicular, or worm shaped, and blend perfectly with the rippling surface above the trout. The dorsal and tail fins are mottled, lower fins dusky, and the lower sides usually red tinged.

The brookie can readily be picked from a mixed group by the white margins on the forward edges of its lateral fins. The squarish tail and minute scales are other distinguishments but general coloration varies widely with waters.

Originally most plentiful in the New England states, the brook trout is now found from Georgia north to Labrador and west to Saskatchewan.

It has been introduced in most likely waters in the United States but is not native west of the Mississippi except in Minnesota and Iowa. It has done well in the west and runs from the cold mountain streams of California, north to British Columbia.

Fishermen who know the score will work the riffles, eddies, rips, deep pools and undercuts along banks, logs, rocks and other similar spots where the current naturally carries along food for the taking. The harder the spot is to reach, the better brookies one is likely to find.

The world's record—which is quite likely to remain unshattered for all time—is a 14½-pounder which was taken by Dr. W. J. Cook, on rod and reel, from the Nipigon River, Ontario, Canada, in July 1916.

The Nipigon still yields many 4 to 7-pound beauties but with modern roads having opened up many of its formerly remote spots, the fishing pressure has greatly reduced the average size. Today, 13 to 16-inch brookies are dandies in any creel.

Since the brook trout chooses its own water and will not reside in sluggish, polluted or muddy areas, the flavor maintains a cherished consistancy of high value. Even when prepared with a minimum of garnishments, the brookie still is excellent eating.

The diet of the brook trout will vary with the locality, the more remote his hangout—the wider his menu. Ordinarily its diet will consist of flies, worms, insects, small fish, nymphs, mollusks and crustaceans.

Each angler has his personal concoction or variation but, generally speaking, wet or dry flies, spinner and bait combinations, wilder dilg spooks, spinning lures and small midgit-Digit casting lures are widely—and effectively—used.

Although fly fishermen probably are the most loyal subjects of his nibs, the brookie, others also find its favor. They are taken spinning, still-fishing and casting with midget plugs. In deeper lakes, trolling with spinner and nightcrawler is an effective method.

Hand made, tempered, split bamboo fly rods are by far the most popular with brook trout fishermen. Although the shorter, lighter actions are preferred, some of the heavier waters require correspondingly heavier rods.

Dry fly action is preferred and leaders, advisably nylon, should be tapered longer and finer according to the clearness of the water. Such lures as wilder-dilg, bass bug spook, punkie spook and river runtie are widely used.

Any good make single action or automatic reel will serve nicely in either wet or dry fishing.

Spinners and light bait casters employ the lightest lines, preferably monofilament nylon around #4 test, and the smallest active lures such as the midgit-digit. Nightcrawlers with spinner and split shot are also produc-

(*Turn to page* 17)

Trout Fishing Tactics

By Donald S. Shiner

Probably no other fish have been so widely sought after by anglers or painted more ardently than the trout. Sooner or later every angler, having trout in his vicinity, turns his attention and skill towards the capture of them. After testing the sport of this opponent after it has taken a fly or bait and having viewed nature's most colorful masterpiece, it is near impossible to prevent one from constantly day dreaming of them.

Most anglers become acquainted with trout at an early age. While most of their attention was focused on the common fish found in still pools, by chance, their bait was seized by a trout and the young angler is truly amazed at the skillfulness and top water acrobatics of this colorful finned creature. His beautiful colors and gameness soon set him aside from other fish and the burning desire to catch trout soon kindles into a flame. Everyone, addicted to catching trout, somehow is never quite the same.

A good percent of all trout captured are taken on live bait. However, the greatest thrill is enjoyed when the angler has successfully taken a trout on an artificial lure, namely, a dry fly. He then fully realizes that trout are the peer of game fish.

In our Eastern waters there are found three different species of trout: native or brook trout (salvelinus fontinalis); brown trout (salmofario); and rainbow trout (salmo irideus).

The brook trout is a charr rather than a true trout, it is one of the handsomest of the trout clan. This speckled beauty inhabits the bubbling white rapids of most all our mountain streams. His need for oxygen causes him to inhabit the tumbling waters where the temperature does not rise above 65°. During the spawning period, the male brook trout is at his best in appearance. His sides are a golden orange spotted with red and blue with dark mottled bands and lines over his back. His belly is snow white and fins are striped or banded in contrasting colors.

The rainbow trout were introduced in our Eastern waters from the West. They are hardy fish, immune from many of the common fish diseases. Unfortunately rainbows which inhabit streams that flow into the ocean migrate to the salt water and return only to the fresh water to spawn. In this respect the rainbow trout are closely related to the salmon.

It derives its name of "rainbow" due to the pinkish red stripe or band which runs the length of its sides. Its back is bluish black in color and dotted with dark spots.

The brown trout were introduced into American waters from Europe. Some of the first browns came from Germany, hence, the common name of German brown trout. This trout is indeed a handsome fish, like the brook and rainbow, bright red and black spots decorate his sides, he has a dark brown colored back, his squarely cut tail characterizes him.

The three species of trout can be found living together in the same stream. However, the deep shady pool are the favorite haunts of the browns while the fast rapids are the location where brook and rainbows will b found.

All three of course have the sam diet of flies, nymphs, crustaceans an other forms of aquatic life such as min nows, etc. Much of their food consist of insects which fall from the air ont the surface of the water. This is th reason why artificial flies used dr (dressed or greased so that they float are so affective in their capture.

Perhaps the most common way o taking trout is by using the commo earth worm or 'garden hackle'. This i not a natural food for trout, and eve though they relish these wiggling form of animal life, there are many time when the trout will refuse them.

Undoubtedly early season when th water is high and roiled from a showe is the most affective time for usin worms. The trout seem to be awar



Reading down: Brook Trout, Brown Trout and the Rainbow.



tainbow and Brookies locate themselves in the ckets of fast tumbling water.

the fact that the rains and water nning from the surface of the sur- unding land often brings worms into e water. At this time a worm pierced htly by a small size 8 or 10 hook and owed to 'roll' naturally with the cur- nt will catch trout. However, the orm should be hooked lightly so that will wriggle without hurting the orm to the extent that is it killed. is important that the worm be fished ep and on the bottom. In fast water sometimes is necessary to add a num- r of small split shot or a strip of ap-around lead to the leader in order get the worm to the bottom.

A leader from four to six feet will lp when bait fishing. As trout are tremely wary, all precautions should taken to present the bait naturally.

Other natural baits which are ef- tive are hellgrammites, small sala- ander, grasshoppers, crickets and innows, even the white wood grub ll take trout occasionally.

The best size hooks when bait fish- g are those of 8, 10, 12 and 14's. pecially in clear water, the finest and htest tackle is required to success- lly take trout. While there are always ceptions to all rules, course and avy tackle will not repeatedly take out under low clear water condition.

The natural baits should be cast up d across stream then allowed to at down. At the end of the float, e bait should be retrieved slowly til within a few feet of the angler. any strikes are forthcoming just as e bait is picked from the water.

Wasps and bees often make good out bait. However, a live bee is dif- cult to capture or handle, the Mc- inty and Western Bee in dry and wet imitations work equally well.

I recall one day on the hard fished aters of the Wapwallopen Creek, the ater was exceptionally low and clear. itting on a rather high bank, the sun as at the right angle that I could see to this pool, there were three trout ning quietly and rising now and then the surface, taking a bug and caus- g little surface disturbance. I had ated a number of flies over them and all had been refused. However, a small bee came struggling down stream and in an instant two of the trout raced for it. Searching through my fly box I found a McGinty pattern size 14 and proceeded to tie the small fly to my leader. The first float pro- duced. Instantly one of the trout raised to the imitation bee and after hooking him, forced him down stream so that he would not disturb the other feeding trout. I was successful in landing a second trout a few minutes later from the same pool. Since then the bee pat- tern fly has taken a number of good trout. I do not hesitate to recommend the addition of this fly to every angler's fly box.

As stated, grasshoppers are a large item on the trout's menu especially on meadow streams. This bait is best used alive so that it is capable of struggling. A hook with extremely fine wire sol- dered to the shank so that the wire can be placed around the 'hopper's'



Nymphs and wet flies have a place in the angler's book of tricks.

body is an excellent way of fishing this insect. Crickets can be fished identi- cally the same way.

Before passing from bait fishing, min- now fishing deserves a few comments. Minnows constitute a large part of the food consumed by large trout. Some trout do not care for them but others are very cannibalistic.

There are numerous ways of fishing minnows and all have their place in the angler's book of tricks. One method is by hooking the minnow through both lips and allowing him to swim about in the eddies and likely looking trout haunts; another method is by inserting the hook through the mouth and out the gill and imbedding the hook in the body at the tail. In this way the minnow can be cast and re- triever in slow or fast jerks, the in- stant a trout strikes, the hook can be set.

Bait does take a large toll of trout each year. However, undisputably, the sportiest way of taking this fish is by an artificial lure or fly.

Artificial lures for trout can be class- ed into three different groups: dry flies, wet flies and nymphs, streamers and spinners. This last group can in- clude miniature plugs and spoons.

Since trout obtain a great propor- tion of their food from the surface of the water, a dry fly consisting of a hook and feathers, fur and tinsel in- geniously combined, imitates a natural insect and is an effective lure. When it is similar in color, shape and size to the live insect, the trout will rise and take it indiscriminately, providing it is presented naturally.

Presenting the fly so that it will float naturally without 'drag' over the feed- ing trout is the factor which requires study and practice on every angler's part.

A stream consists of moving cur- rents, each at a different speed. Assume that a fly is cast in a small eddy but that the line was cast across some fast moving currents, instantly the cur- rents rush the line down stream and as soon as all the slack line has gone between line and fly, the fly is 'dragged' across the surface of the eddy and out into the fast moving current. A cast of this nature would not result in a trout rising to the fly since an insect, which has fallen into the water, is not capable of skimming across the water as did the artificial, immediately the trout are suspicious and will re- fuse the offering.

To overcome this 'drag', requires a study of the currents in the stream you are fishing. This is not complicated since a glance will tell you where the fast and slow moving currents are and the best position to cast the fly to overcome this handicap.

The pattern of a fly also is a factor determining whether trout are creeled. There are numerous kinds of insects found along a stream on which the trout feed. Some of these insects hatch by the thousands from nymphs, and a hatch of this nature usually brings the trout into action immediately. From these flies and the many other insects,

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Brown trout are generally found in the deep pools.

Pat and Mike and the Rainbow Trout

By Don Blair

YOU take a couple of men named Pat and Mike, add four cans of rainbow trout fingerlings, and you have the basis of a good fish story.

Only this is not exactly a story in the accepted Pat and Mike vein. This one happens to be true. Pat and Mike have finally started something practical, I think.

Deward Wykoff (nicknamed Pat) and Mike Donley live in north central Pennsylvania. They are members of that vast sportsmen's club, the Clinton County Fish and Game Association. Among other things, the club maintains a pond in the Kettle Creek country where they receive newly hatched trout fry in the spring, feed 'em all summer, and release them in the fall.

A year ago, Pat and Mike drew an assignment from the club to help distribute these fingerlings. With a good day's work behind them they drew four cans of rainbow fingerlings to restock the brook nearest their homes.

It's a quarter mile carry over rough country to the headwaters of their brook. And after they had lugged the first two cans in, and raced uphill to the car, the whole thing began to be hard work, no less.

About that time Pat says to Mike, or Mike says to Pat (it isn't clear who weakened first)—"Let's put 'em in the beaver pond."

Put to a vote, the decision was unanimous, neither party dissenting. Since the beaver pond is right beside the road; within spitting distance, that is, it doubtless influenced the voting.

This particular pond is about as small as they come, 40 or 50 feet wide, maybe a hundred feet long, and possibly four to five feet deep near the dam. It is 10 or 12 years old, and contains, always, an over-abundant population of four to five inch brook trout plus a few wise old lunkers. It gets a hard going over by tourist and native fishermen each season. Many of these small trout are caught over and over again, unless they swallow the hook, of course.

Anyway, Pat and Mike dumped the remaining 200 three to five inch rainbow fingerlings into the beaver pond and hurried home to supper.

Next June is where I come in. Pat and Mike told me about the rainbows they had stocked in the brook and, after a little "hemming and hawing," about the ones they had dumped into the pond.

Frankly, they were a bit worried. Several fishing trips to the pond in April and in May had netted as many baby brook trout as usual, but nary a single rainbow had turned up.

They thought they might have died. And felt a little guilty for, as Pat put it, wasting them.

We visited the pond, and proceeded to fish. After awhile, I hit the combination and unlocked the door to Pat's and Mike's rainbows. And they were beautiful.

Mind you, the season had been open for six or seven weeks. Dozens of fishermen had tried the water and caught brookies only. But the other trout were there, fat and incredibly sassy, if you knew the combination.

As we caught the rainbows we measured them before we let 'em loose. They had grown, in one winter, to an amazingly uniform eight inches. This the more remarkable because the pond is, as always, over-populated with small brook trout. We caught five inch brook trout that day with no sign of parr markings, but the eight inch rainbows had 'em.

The insect trout food supply of a new made beaver pond is tremendous, but after a few years it tapers off as fertility of the bottom soil changes, and as the weight of trout increases.

I think the reason the boys' rainbows grew so much faster than the native brook trout was because the rainbows went after a totally different class of insects—food the brook trout ignored. Don't hold me to this, it's just a guess.

I do know that a small brook trout will go all out to catch a dry fly th size of a bumblebee, and a small rain bow will lunge just as viciously at fly no bigger than a flea off your houn dog—or mine. Mine has fleas, I know

Thus the rainbows waxed fat an colorful while the brookies found sli pickings in the old beaver pond.

We have, in Pennsylvania, dozens these beaver ponds, with the sam stunted brook trout population. Othe states have them, I feel sure. If 20 rainbow fingerlings can be added to small pond 50 by 100 feet (less than quarter of an acre) and grow to fa legal sized fish over winter, it's some thing of a low cost miracle, and wort a try in other ponds and in other sec tions of the country.

Little ponds can get pretty warm i midsummer, and the question wi arise—Can the rainbows take it Brown stagnant beaver pond wate isn't very pleasant to look at along i late summer, but in many of the pond I know the brook trout survive, so am not worried about the rainbow: We are told they can stand warme water than can brook trout.

But just to check up on this I drov back to the pond on the last day of ou trout season, which is the last day July. I caught trout in the stagnar coffee colored water, both brook an rainbow, though not as many as had two months before. But then I di not fish as vigorously, or as long, fo the sun was beastly hot and the mos quitos fierce.

If these rainbows survive the sum mer, as I have every reason to believ they will, from catching them on Jul 31—what comes next? As they grov they will begin to forsake their micro scopic insect diet and look for soli food. They will see hundreds of sma brook trout and my guess is, they wi eat 'em. And if they do we will hav

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One of Pat and Mike's beaver ponds.

THE UNEXPECTED

BY ALBERT G. SHIMMEL

THERE is one infallible rule in the gentle art of Izaak Walton which supersedes all rules past, present and future. Simply stated it is "Expect the Unexpected."

Trout in particular are creatures of whimsey, persuing their destiny in a manner that leads the average angler to language and thoughts that would bar him from polite society. Perhaps it is well that Saint Peter, patron saints of all anglers, is the keeper of the portals of Paradise.

Years ago one of my angling companions, a clergyman, and I were working a mountain stream. The water was a bit above normal and lacked the sparkling clearness that could be expected later. We had been getting an occasional brook trout by sinking a Gold Ribbed Hares Ear and a Red Quill repeatedly in the back eddies and slower currents of the larger pools. It was slow, tedious and unspectacular work. We found a sunny bank on the edge of an ancient logging dam at noon and set about the business of satisfying the cravings of the inner man. In order to keep my leader pliable I cast my flies into a deep back-water and placed the rod in the forks of a convenient willow bush. It was comfortable to just sit and enjoy the sight of the water and early migrant birds that worked the streamside thickets.

Suddenly my friend called my attention to the line moving slowly across the eddy. Scrambling quickly to my feet I secured the rod and tightened the line. A strike and I had visions of one of the good browns that were sometimes found in the stream. My friend cleared the folds of his landing net and stood by for the kill. The fish moved sluggishly but the weight and the current caused my light fly rod to assume a very satisfactory arc. Slowly I worked it in and my friend, reaching deep, enfolded the fish and lifted it quickly to the surface. At his startled exclamation I saw him lift from the net not the large brown trout of our visions but a feebly flapping sucker. The autopsy necessary to recover the fly solved the mystery of the amber globules we had found in the stomachs of our trout. They had been feeding on sucker spawn.

Chet is a wet fly addict of the strictest persuasion and proves time after time that trout will take them when conditions are almost hopeless. Occasionally I persuade him to try other methods, but his day usually begins with wets and ends the same way.

One day he was kidded into trying a Black Ghost as a point fly in the pair he had been using very successfully during the morning.

The swift rocky narrows ended in a deep pool guarded by a pair of cottage size boulders. Casting with a "just to please you" attitude he came within range of the first boulder. All at once he snapped to attention, the arteries in his neck marking his rise in pulse and blood pressure. I watched the cast fall a second time in the shadow of the boulder and swing in teasing jerks across the deep fast current. A huge dark shape followed at a respectful distance until the tiny streamer danced and struggled in the white capped rips. With an explosive slap of his tail the big trout disappeared. Again and again Chet worked the streamer, but receiving no encouragement he came wading over to find a seat on my boulder. When his pipe was going well he admitted that the first strike had been vigorous enough to telegraph through to his hand and bring him a shock. Had he been alert enough to answer the strike I am convinced that the big fellow would now be gracing an oaken panel for Chet is a past master of the art of handling hooked fish. I notice also that a Black Ghost streamer or two are usually found in his field kit.

The light was fading rapidly and the trout seemed to increase their activities as the light diminished. A slight dimple marked a rise just at the rear of the birch root where the water curled into a small eddy. The Honey Spider was a bit slimed from former captures and precious as the minutes were I substituted another, holding it high to bring the eye of the hook into relief against the sky.

It was a few seconds before my eyes again accommodated to the dark shadows and promised at least a chance of following the float of the high riding bit of feathers. The cast made and for a few seconds the fly danced then disappeared without a surface disturbance. Thinking it a small trout I struck softly and then pushed it by rod pressure in order to force the fight. He led easily until brought to the surface where he showed surprising size and strength. It was soon over and as I reached into the net to extract the fly imagine my surprise when another fly fell into my cupped hand. My own fly was secured and the trout, a brown of 14 inches, added to my creel. By this time the dark had become a reality so I took down my tackle and walked a short distance up to the car. Another angler came from the stream and turned aside to compare notes as anglers will. It proved to be a neighbor of mine and when I inquired as to his luck he showed two brace of browns from 10 inches to a foot in length. He explained how about half an hour before he had struck a nice brown and after it had put on a spectacular fight the knot parted at the fly. Casually inquiring as to the pattern and size of the fly he had lost I extracted it from my hat band and returned it to the owner.

Tradition says if a trout is pricked by the hook he will not rise again that day. Here was the exception that proved the rule. This trout not only rose but was hooked securely twice within a half hour.

The big limestone creek was more

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The following story is printed to point out the contrast of fishing in America where anyone can fish anywhere with the system in Europe where only the rich can fish in very limited waters.

Good Old American Fishing

By Joseph Marshall

I HAVE been going over my flies, lines and rods in preparation for the opening of the trout season, trying meanwhile to decide just what stream I would honor with my delicate casts—Pine Creek, Doe Creek, the Doe River or several others which I would just as soon not mention. It is never an easy choice for I am continually drawn between the equally strong attractions of using tried water, or trying new water and usually I never know until bedtime of the night before Opening Day, exactly where I will go. I'm not alone in my indecision; the American angler, bass as well as trout, devotes at least as much time to trying to decide where to fish as what to fish with.

It occurred to me suddenly that this is a peculiarly American condition and state of mind. Few anglers in Europe—or anywhere outside the Western Hemisphere for that matter—are ever faced with the problem of choosing between several trout streams. To the average British angler, for instance, trout fishing is limited not only to one stream, but to one stretch of one stream, and quite possible to certain days of the week. In Britain and, in general, throughout Europe, the concept of public waters is nonexistent! Only the very large rivers such as the Thames, Seine, Rhone or Rhine, which contain only coarse fish, are open to the general public. The trout streams are invariably private property and the fishing rights belong solely to the owners to be disposed of pretty much as they please.

In Britain if the angler has the means, he owns outright or leases a stream which he enjoys himself or with his friends. Or he belongs to a club which owns or leases such a stretch and the membership of most clubs is chosen at least as carefully as that of our snootier country clubs. Or he obtains either through friendship or a fee the right to use one or more rods on a stretch of stream, throughout the season or only on certain days. All this runs into money, of course, and only the man who has plenty of it, plus plenty of friends in similar condition, has any choice of water. Indeed, if he does not have the means, the background and the friends, it is highly unlikely that he can think of trout fishing at all—at least not legally. As for the barefoot boy with the cane rod and the can of worms, his British counterpart is the Earl's son, followed by the butler or a footman with the worms.

Of course, we do have a good deal of the same sort of thing here in the U. S. especially in the East. But the condition is disappearing; the private streams are increasingly being forced to open to all owners, and unless the American angler disappears outright he will always have a choice of fishing grounds.

The difference between the American and the European concepts of fishing was first called to my attention during a tour I made of Europe, th Mediterranean regions and North Africa during the war as a war corre spondent. I recall a very pleasant con versation with the Treasurer of Iceland one evening during which he invite me to come back sometime to try th trout and salmon fishing with him o one of the island's best streams, o which he "had two rods." In London had another very pleasant fishing con versation with an important govern ment official and an invitation to com back sometime for a week-end of fish ing on one of the wonderful "chalk streams of south England, which hi family has owned for generations. I France, in the Vosges mountains, whil staying in a resort hotel commandeere by our forces, I was assured by th manager that should I care to favor th famous hostel with my patronage i peace time, I could be assured the bes trout fishing in the area, for the hote owned the best stream. I did do som trout fishing in Corsica—on openin day for trout in Tennessee incidentall —and while we did not bother to as anybody's permission, it has occurre to me since that we were doubtles poaching.

All of my conversations were wit people of position and means, or im plied the need for them; one did no strike up a conversation on trout fish ing with the otherwise notably gar rulous London cabby, or a clerk in store or, unless it were on the subjec of poaching and in the strictest con fidence, with the villagers. Like th public schools, the trout streams o England—and with modifications o Europe as a whole—are open only t those with the right background an means.

Still, angling in Europe and particu larly in England, has its points; what ever it may lack in democracy i makes up in quality and convenience Like the Rolls-Royce, British luggag and china, English fishing is for th few, but for those few it is superlative Indeed, I have no doubt that in th Happy Fishing Grounds, a sizeabl part of the reservation will be devote to trout fishing English style—excep of course, that it will be open to a comers, whether the prefix be Hor or plain Mr., Earl or plain Old, as i Old Joe.

To begin with, one seldom lack elbow room on a British trout strean



Typical everyday scene at Blacklic Pond in Indiana County where both young and old spend many happy hours fishing the waters regularly stocked by the Pennsylvania Fish Commission.

State Fish Culturists Hold Conference



Those who attended the meeting reading left to right from top row down, and the years of service in their work are: Glen Spencer, Foreman, Pleasant Mount, 19 years. Merrill Lillie, Supt., Corry and Union City, 21 years. George Margarel, Supt., Reynoldsdale, 15 years. Leon Van Gorp, Foreman, Huntsdale, 7 years. C. R. Buller, Chief Fish Culturist, Bellefonte, 34 years. Niels Sorenson, Foreman, Corry, 22 years. Arthur Bradford, Fish Pathologist, Bellefonte, 6 years. Philip Stark, Foreman, Pleasant Mount, 21 years. Dewey Sorenson, Supt., Bellefonte, 31 years. Bernard Gill, Supt., Tionesta, 33 years. J. L. Zettle, Supt., Pleasant Mount, 20 years. T. F. O'Hara, Construction Engineer, Bellefonte, 29 years. G. L. Trembley, Chief Aquatic Biologist, Bellefonte, 2 years. James Biddle, Foreman, Bellefonte, 14 years. Norman Sickles, Foreman, Linesville, 9 years. John Pratt, Foreman, Union City, 19 years. Edwin Hahn, Supt., Erie, 14 years. Robert Brown, Foreman, Bellefonte, 9 years. John Wopart, Supt., Torresdale, 20 years. T. J. Dingle, Supt., Huntsdale, 32 years, and Howard Fox, Foreman, Linesville, 16 years. Fred K. Riedel, Supt. of the Linesville Hatchery with 41 years service, was absent due to illness in his family. This group of 22 men represent a total service with the Pennsylvania Board of Fish Commissioners of 434 years.

A fish-cultural conference for hatchery superintendents and foremen as well as for other personnel of the Pennsylvania Fish Commission was held at the Bellefonte Hatchery from February 2 through February 4, 1949. Mr. C. R. Buller, Chief Fish Culturist, was in charge of the program.

An inspection tour was made of the state hatcheries at Bellefonte, Huntsdale and Reynoldsdale. Also included in the itinerary were trips to the United States Hatchery at Lamar.

The conference included a meeting and dinner with Commissioner Charles A. French in Harrisburg on February 3, and was terminated by a further meeting with Commissioner French at the Bellefonte Hatchery on February 4.

This conference marked the first meeting of this group since before the war. It is planned to continue these conferences in the future.

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he Opening Day pictures which show merican stream as thoroughly covred by anglers as the highways leading to our great metropolis are covred with motorists on a Labor Day eek-end, have no counterpart in Engnd. Anglers are naturally thicker n Sundays and Bank Holidays than n week days, but there is always oom for the angler to make handsome ng casts over water which has not een thrashed to a foam by the waders r any army of previous anglers.

The turnover in trout stock is by no neans as complete either. With fewer nglers to scare away the bugs on hich the trout feed, the fish live onger and grow larger. The English rout can with some justice consider he stream a permanent home, whereas to the American trout in many sections the stream must seem to be little nore than a self-service fish market—. stop-over between hatchery and consumer.

Moreover, there is no wilderness in England. I flew over Sherwood Forest, Robin Hood's famous hide-out, and vas not aware until months afterward hat it was not a farmer's wood lot. Up in the highlands of Scotland there s some rough country, but it is out of the running even in comparison vith our tame Eastern streams. The amous chalk streams flow through astoral country and are much more ikely to be bordered by pastures—hough they look like our better lawns —than by trees and shrubbery. The najority present no such traps for the ly on the back-cast as are present along 90 percent of our streams. The angler, therefor, may practice his art with all the delicacy which we Americans may claim on the verandas of our fishing hotels, at the end of the ishing day, but seldom display on the stream.

For all these reasons, and some others, the British angler goes about his trout fishing with a most enviable ease, comfort and convenience. On the chalk streams, no British angler would think of flailing the water at random, fifty casts to the hour, as we do here. Indeed, he would probably be expelled from the club or, if it were his own stream, put down as a frightful bounder. The standing operating procedure in the right circles is to prepare the rod and flies, place them within handy reach on the club or mansion terrace, and apply oneself to a few drinks, or tea and buns, or a game of croquet. Meanwhile, one's wardens or gillies would be keeping an eye on the stream and the hatch.

When the hatch arrives, and the trout are raising, word comes to the terrace. One leaves ones drink, picks up the rod and meets his gilly on the stream side. When one sees a rise of the proper and requisite size, he presents a carefully cast dry fly or a nymph—but never, on the chalk streams, on pain of excommunication, a wet fly—to the rise. Upon landing the fish, one finds or one's gilly finds for him, another rise and the procedure is repeated. When the rises run out, one returns to the terrace, and the drinks or tea, leaving the gilly behind to watch for another hatch.

Under those circumstances, it is altogether possible on some streams, for an angler to rush out to the stream in white tie and tails, to take advantage of the evening rise, before sallying forth to dinner at a neighboring castle; and most of the time a comfortable tweed country suit, or a get-up for golf, is altogether appropriate and fit for the job, although like his American counterpart, the British angler loves a fishing jacket of many pockets, particularly when it is tattered with age and aromatic with memories of trout kept overlong in the game pocket.

To be fair, it must be said that this is not altogether the result of sociological differences; a good deal of it is the result of the difference in fishing conditions. The chalk-streams of the south, are very clear, slow moving streams, with a smooth surface, and relatively smooth bottom; the fish are brown trout, very partial to the natural fly and wary through centuries of being stalked by Isaak Walton and all his descendants. A wader would

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For fish the size of this sturgeon, displayed by the author, use a gaff for landing.

Tricks in Landing Fish

By Frank J. Floss

THERE are thousands of fishermen who can name and use the right fly or plug for practically every water condition. They know where and when to use the wet fly; what dry fly pattern to use when there is a certain hatch on; when to change from a diving plug to a floating plug. But . . . believe me, few and far between are the fishermen who know how to land a fish the right way after they have it tired out and ready for landing. For years I've watched fishermen lose fish after fish, just because they did not know the proper way of landing a fish with a net, gaff, or just the bare hands.

You may say, "So what! They should lose their fish if they do not know the tricks of landing it!" That as far as the individual fisherman is concerned may be so, however, there is more to this landing a fish than the fisherman's loss of a fish for his creel. We must look at the conservation side of it too. In the first place no fisherman should attempt to land a fish unless it is of legal size. Fish that are under-size should never be lifted from the water. Fishermen can tell by just looking at a fish how big it is by comparing the size of it with the length of their rod grip. If it looks smaller than the grip it should be released by sliding the hand down the line and removing the hook, while the fish is still in the water. For althought the fly, bug, and plug fisherman hooks most of the fish he catches through the lips, if he lifts the undersized ones from the water to remove the hook, they usually die after being returned to the water from rough handling or fighting the net.

On the other hand, no fisherman likes to lose a legal size fish after he has successfully hooked it and fought it to a standstill. Therefore, a fisherman only cheats himself by not knowing the fine points of landing a fish.

No fish can be considered caught until it is safely boated or put in a creel, or bag. And there are three ways to land a fish and put it in your bag or creel. They are as follows: (1) with the bare hands; (2) with a net; (3) with a gaff.

The first method seems to be the most popular, for more fishermen grasp their fish with their bare hands to land them than all the users of the net and gaff combined. And as you have probably guessed, more fish are lost trying to land them with the bare hands than the combined losses of the net and gaff users.

However, small fish like perch, bluegills, rock bass, etc., can be landed by grasping with the hands without much trouble. But when a fisherman attempts to land a big mouth bass or a salmon by this method he must know how and where to grasp his fish to get the most secure grip. When trying to land big fish with the bare hands work the tired fish in close to you, then with a slow movement reach down and slowly work the hand up over the fish to a point above his gills, always work from the tail of the fish to the head, never try to grasp a fish from the front where he will see your movements. When the hand is just over the gills reach down very quickly and grab the fish with the thumb and forefinger by forcing in the gill cover or operculum, then quickly lift the fish onto the shore or into the boat. But remember to grab and lift the fish quickly once you have your hand in position, for if you pause in the operation the fish may force itself free of your grasp. Another way is to grasp fish with large tails just ahead of the tail, by circling with the thumb and fingers. I've seen Canadian guides beach large salmon by this method many times. However, I do not recommend any fisherman using his hands to land a large fish, a fisherman should only use his hands as a last resource, for many prize fish are lost by this method. At best it is only a hit or miss method, because the weight of the fish coupled with its slippery covering, makes it harder to hold onto than a bar of soap in a bath tub.

Large fish like the salmon, lake trout, muskie, pike, and mackerel should as a rule be landed with a gaff. Because the opening in most nets is too small and the fisherman has a hard time getting the net and the fish to coincide, while holding his rod high with one hand and the net with the other. If you have ever tried to guide a 30 pound muskie into such a net single handed you know what I mean. While it is an easy matter to clamp or hook these big fish with a gaff. Another reason for using the gaff in landing big fish is to prevent personal injury from the sharp teeth and razor like edges of their gill covers, not to mention the sharp spiked dorsal fin, that can slice a man from elbow to hand.

When ready to land a big fish with a gaff, pick up the gaff first and hold it down in the water, then slowly work the fish under it or near it, then with a quick motion hook or clamp the gaff just back of the gill covers. Don't follow the fish around with the gaff, that will only scare it. Keep the gaff motionless and work the fish to it, and the fish will be yours.

The smaller fish such as the small mouth bass, brook trout, brown trout, and other medium sized fish are easy to land with a net and the fisherman has little excuse for losing one once he has it in the net. Although, I've seen

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To relieve strain on your rod, line and reel use a gaff or net to land fish the size of this small mouth bass.

PENNSYLVANIA REPTILES & AMPHIBIANS

A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

(No. 1 . . . . . .Salamanders)



SPOTTED SALAMANDER, (Ambystoma maculatum).....Maximum length 9 inches; body purplish-black with two rows of large yellow or orange spots extending from head to tail tip; breeds in ponds in early spring, laying eggs, enclosed in jelly, in clusters; ranges throughout the state.



JEFFERSON'S SALAMANDER, (Ambystoma jeffersonianum).....Maximum length 7¼ inches; dark gray or black, often marked with sprinkling of small bluish silver spots; distinguished from similar Slimy Salamander by its long, slender toes; rarely found except in breeding pools in the spring; recorded from 22 scattered counties.



EASTERN RED-SPOTTED NEWT, (Triturus viridescens viridescens), Land stage pictures here).....Maximum length 4 inches; larvae transform in late summer and live on land for two or three years as bright scarlet or orange "efts," shown here; frequently seen walking on forest floors following rains; newts occur throughout the state.



EASTERN RED-SPOTTED NEWT, (Triturus viridescens viridescens) (Aquatic adult pictured here).....Maximum length 5 inches; recognized by one to eight or more red dots, encircled with black, on each side of the olive-green body; belly yellow with black polka dots; lays up to 400 eggs in spring, attached singly to leaves of plants under water.



FOUR-TOED SALAMANDER, (Hemidactylium scutatum).....Maximum length 3 inches; smallest salamander in Pennsylvania; has gleaming white belly flecked with black spots; back reddish-brown; four toes on each hind foot instead of usual five; groove around base of tail (see arrow) facilitates detachment in time of danger; eggs laid April-May in sphagnum or moss overhanging water so hatching larvae may drop into water; collected in 30 scattered counties.



EASTERN RED-BACKED SALAMANDER, (Plethodon cinereus cinereus) .....Maximum length 5 inches; slender terrestrial salamander in two color phases; one, with back bright red sprinkled with black; the other, with back uniform gray or black; belly finely mottled with salt and pepper black and white in either phase; eggs 3 to 13 laid like bunch of grapes in decaying logs; hatchlings never go near water; common throughout Pennsylvania.

Club Activities

First Annual Sportsmen's Show Proves Successful

The Perkiomen Valley Sportsmen's Show in Norristown City Hall, the week of Feb. 7-12, turned out to be fairly successful if viewed from the angle of good will and favorable publicity that it created for the club. From a financial or profit making angle we cannot say too much—except that the profit when all accounts are settled will not be over $50. While a sensational profit was not made from this first venture into the hazards of the show business, the club did gain a lot of valuable experience and "know how" for next year's show.

The weather hit the attendance several nights, but the Tuesday evening crowd was good and the Saturday evening wind-up was very encouraging.

Clinton County Fish & Game Association

The club's annual fishing contest winners were recently announced as follows:

Ernest Bloom, Avis, brook trout 17 inches; Samuel Culvey, Lock Haven, brown trout, 25½ inches; P. E. DeHaas, Blanchard, rainbow trout, 20 inches; William Mann, Beech Creek, rainbow trout, 20 inches; Louis Guerriero, Lock Haven, bass, 17½ inches; Earl Bittner, Lock Haven, grass pike, 26 inches.

Further winners were to be announced at a later date.

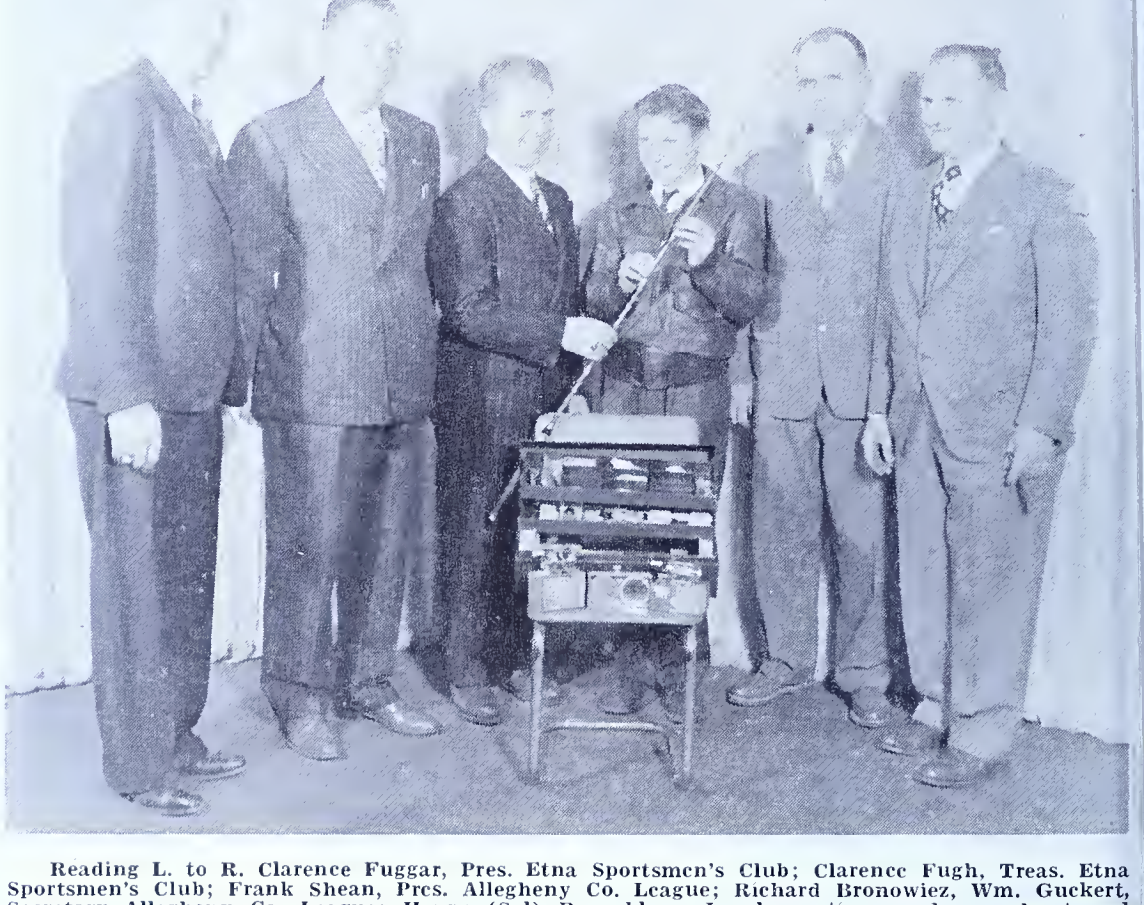
North-Central Div. Pa. Fed Sportsmen's Club

The secretary reported that there had been a very nice increase in the division membership, that at present it was 8673, and that as quite a few clubs had not as yet turned in their memberships that it looked like the membership would go to 12,000 or better. He expressed the thanks of the division officers to all the clubs, their members and officers for their efforts in building up this nice membership.



Seven members of the Philadelphia Chapter IWLA stocking the Wissahickon Creek with trout in preparation for the '48 trout season opening. Included in the photo are Frank Thomas, president of the Chapter, and Morris Teef the secretary.

Etna Youth Receives New Fishing Outfit



Reading L. to R. Clarence Fuggar, Pres. Etna Sportsmen's Club; Clarence Fugh, Treas. Etna Sportsmen's Club; Frank Shean, Pres. Allegheny Co. League; Richard Bronowiez, Wm. Guckert, Secretary Allegheny Co. League; Henry (Sol) Rosenblum, Local sporting goods merchant and Director of Etna Sportsmen's Club.

Hillside Rod & Gun Club

About 150 attended the annual banquet of the club, held recently. A delicious turkey dinner was served.

Officers elected for the new year are: president, Charles Boinski; vice-president, Raymond Manikowski; financial secretary, Millard Diehr; recording secretary, Fabian Manikowski; treasurer, Joseph Brooks. Board of directors are: Paul Davies, Andy Makowsicz; retiring president, Al Colcomb,

James Osman, of Tioga, game protector; O. H. Miller, Tioga representative of the County Consolidated Sportsmen' Clubs; Leland Cloos, of Middlebury, fish warden, were present at the meeting and spoke briefly on fish and game.

Clinton County Fish and Game Association

The Association opened its 1949 membership drive at a meeting at the Clinton County Court House. There are now 4,466 members in the association, and this number is expected to be doubled in spite of the fact that the dues were increased from 50 cents to $1.

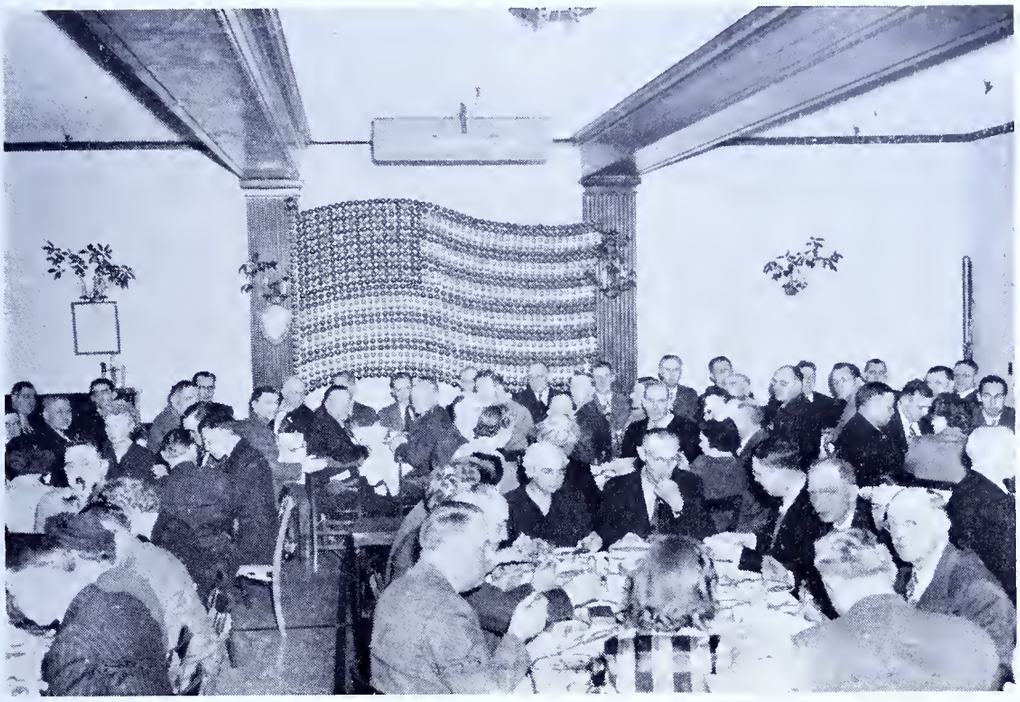
Richard Bronowiez, of Cherry Street, Etna is a very deserving and lucky boy. Richard was presented with a complete fishing outfit at the Allegheny County Sportsmen's League meeting sometime ago.

Each club member of the Allegheny Sportsmen's League submits the name of a boy, who is worthy but unable to purchase his fishing equipment who is interested in fishing and the advancement of sports, and from the group one boy is selected for the annual award. This year's award was made to the youth selected by the Etna Sportsmen's Club.

Richard received a hand made fishing rod made by Edward O. Sebolt, of Fredericktown, Pa., with the Allegheny County League giving him a reel and line; the Etna Sportsmen's Club giving him a tackle box filled with plugs, hooks, sinkers, bobbers and stringer and the Sols Store, of Etna, donated a Shakespeare Wonder Reel and 100 yards of South Bend Orena line.

Richard is now fully equipped to go fishing and is a real proud boy and booster for good clean sportsmanship.

Tioga County Sportsmen Banquet



View of part of the banquet hall at the Tioga County Sportsmen's Banquet.

The annual banquet of the Tioga County Consolidated Sportsmen's Association was held at the Penn-Wells Hotel Thursday evening, Jan. 27, with over 300 members attending.

Member clubs of the association are: Nessmuk Rod & Gun Club, Antrim Rod & Gun Club, Asaph Rod & Gun Club, Arnot Sportsmen's Association, Big Elm Rod & Gun Club, Cowanesque Valley Rod & Gun Club, Hillside Rod & Gun Club, Keeneyville Rod & Gun Club, Little Marsh Rod & Gun Club, Long Run Fish & Game Club, Inc., Morris Rod & Gun Club, Mansfield Sportsmen's Association, Potter Brook Rod & Gun Club, Stony Fork Rod & Gun Club, Sullivan Rod & Gun Club, Pine Creek Sportsmen's Club, Westfield Rod & Gun Club, Inc., Tioga Rod & Gun Club, Covington Rod & Gun Club.

Louis W. Stevenson, of Wellsboro, was toastmaster. The speakers were J. Allen Barrett, Director of Public Relations for the Pennsylvania Board of Fish Commissioners, and Dr. Logan J. Bennett chief of the Wildlife Research Division, U. S. Fish and Wildlife Service.

Their talks were of great interest to sportsmen and were illustrated by moving pictures. An interesting display of animals, fish and birds native to the area was arranged in the hotel lobby by the Nessmuk Rod & Gun Club, Pennsylvania Game Commission and Clearfield Taxidermy.

New officers are: Francis Lawton, of Stonyfork, president; Raymond Churchill of Keeneyville, Joseph Borden, Jr., of Tioga, and Paul Willis of Covington, vice presidents; Adam Kaminski, of Blossburg, Secretary-treasurer.

Mercer County Federation Sportsmens Clubs

The Mercer county boys, members of the northwestern division, are planning to boost their membership so that the State Federation roster may climb over the 200,000 mark this month.

Kettle Creek Sportsmen's Assn.

When the club held its final meeting of 1948 they laid extensive plans for future projects. Topping the list was the proposal to go ahead with the construction of fish ponds. The club now has four of these essential stream improvement projects completed. There were about 50 members present at the meeting which was in the charge of Bill Hayes, the president. The club now has nearly 1,500 sportsmen on the rolls with the bulk of local membership from Germania, Cross Fork, and Carter Camp and the others from every section of the state.

Results of York Casting Contest

Contestants from New Cumberland, Harrisburg, Freysville, Caledonia and York met in competition in demonstrating their skill in a plug casting tournament sponsored by the York Chapter of the Izaak Walton League at the York Sportsmen's Show on Saturday, March 5th. Chester Smith, Freysville, took first prize with a score of 87% for accuracy.

J. B. Smith, York, won second prize and Earl B. Benner, Jr., New Cumberland, won third prize. Other contestants and their manner of scoring were as follows: J. S. Forrest, Manchester; F. D. Kunkel, New Cumberland; Edward Brubaker, Harrisburg; Warren L. Benner, New Cumberland; Edward Sowers, York; Norman Munson, York; James A. Lefeever, New Cumberland and Thomas Norris, Caledonia.

Earl B. Benner, Jr., F. D. Kunkel, Warren L. Benner, Edward Brubaker and James Lefeever represented a casting team from the Harrisburg Hunters and Anglers Club.

General rules and regulations as set up by the National Association of Scientific Angling Clubs was used. George James, Carlisle and John S. Ogden, York, representatives of the Pennsylvania Fish Commission were the judges.

Beaver Falls Sportsmen's Association

I. S. (Sig) Sahli, new president of the club named his committee chairmen for the year at the last regular meeting of the club. The chairmen are as follows: Entertainment, Chris Musick; Membership, Carl Gregg; Fish, Earl Croud; Game, Curt Marlatt; Prizes, John S. Patterson; Casting, Willard Brown; Farm, Clem Davidson; and Legislative, E. Y. Calvin. One of the guests attending was Cliff Iman, fish warden of the district. He told of the alarming number of violations in 1948 and urged the help of all organized clubs this year by reporting violators. "It is the only way to curb the unlawful practices that developed last year," Iman declared.

Jr. Conservation Clubs Will Help Build America

Conservation clubs for boys of school age are helping to build America's future, according to the Wildlife Management Institute. One of the most progressive of these statewide programs is that found in Kentucky.

Started in 1945, the Kentucky Junior Conservation Club program now has 228 local branches throughout the state. Under the over-all direction of Ed Adams of the Division of Game and Fish and his seven assistants, local groups are directed by approximately 110 state conservation officers.

The boys receive membership buttons and cards, the Division magazine, and are furnished with monthly projects upon which to work. With the project sheets as a basis, the field men give lectures illustrated with color slides to make the work as interesting and as educational as possible. Moving pictures of various phases of conservation are shown regularly.

Monthly projects are diverse. The boys are furnished day-old quail to raise for release; they are given seeds and seedlings to establish food and cover patches; and are supplied fish for restocking farm ponds.

During the summer months when the boys are out of school, summer camps are held at Dale Hollow Lake and Kentucky Lake. There, the youngsters are given a full week of camping at a cost of only seven dollars with all other expenses furnished by the Division of Game and Fish. At camp they receive instructions in swimming, water safety, casting, motor boat handling, marksmanship with both rifle and light shotgun, archery, nature study, and general woodcraft. State rifle and Moskeet meets are held annually, with two age groups: those under 13 years of age, and those 13 and over. Most of the boys have built their own rifle ranges and have become affiliated with the National Rifle Association.

The program hopes to add at least 100 new clubs during the coming year. Program Supervisor Adams states: "It is our aim to make our future citizens conservation minded so that their generation will have a more abundant supply of game, fish, minerals, trees, and soil to furnish them with a better means of recreation and food supply."

Your Fishing Photographs

By Dick Fortney

THE easiest thing to do, once you have taken a roll of pictures on a fishing trip, is to tote the film to the town camera shop and have it developed and prints made. But that's not the way that provides the most fun. Nor, as a matter of fact, the most economical way.

The fishing photographer who gets the most fun out of his hobby develops his own negatives and makes his own prints—as many of them as he wants for himself and for distribution among his friends.

There was a time when making pictures was a very mysterious business so far as the amateur was concerned. It was almost black magic, and no layman even thought of trying to understand, much less imitate, the work that went on in the professional photographer's dark-room.

But no more.

I got quite a surprise when, after exposing the first roll of film in my first camera, I took it to a professional photographer.

"Why don't you make your own pictures?" my friend asked.

"And cheat you out of some business?" I replied.

My friend disposed of that argument quite neatly. He just pointed out that he would make more money selling me paper and chemicals than he would making pictures for me.

"But I'm thinking of you," he went on. "Making your own pictures is even more fun than taking your own pictures."

I gave in, and he told me how easy it is to make pictures. One kit, costing around $7, was all I needed to get started. It contained all the chemicals, paper, and equipment needed for a beginner. It also contained a well-written instruction book. By following the directions in this book, I easily developed a roll of my own films and made contact prints from them.

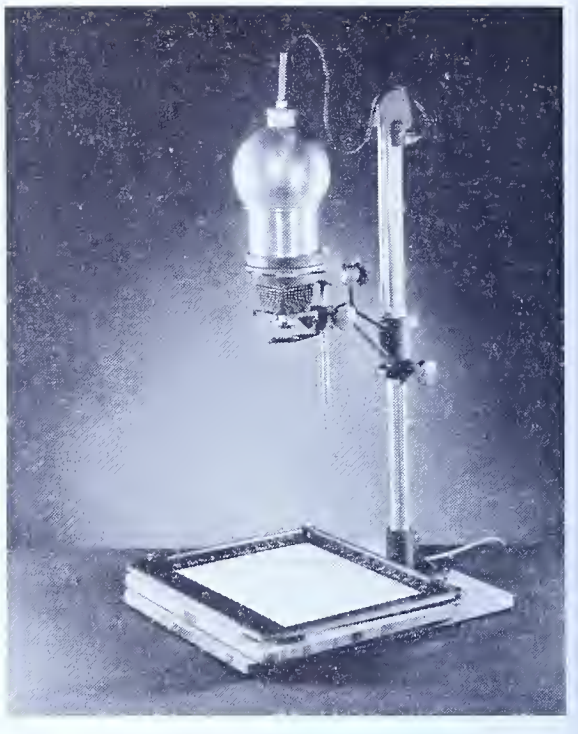
It was fun, all right, but then complications set in.

I acquired a 35 millimeter camera. Contact prints were out of the question then, for the little negatives on a 35 millimeter film are only about the size of a large postage stamp. And no picture that tiny is worth giving to friends or putting into an album. It just doesn't show anything.

Again I consulted my camera shop friend.



This illustration is made from a photograph 4 by 5 inches in size, which was an enlargement from a 35 millimeter negative hardly bigger than one of those big three-cent postage stamps.



An enlarger enables the amateur to make blow-ups of his best negatives. It also is a must for sportsmen who have 35 millimeter cameras, because of the miniature size of the negatives. This is a Kodak Precision enlarger.

"You're ready for the next step," he said. "What you want now is an enlarger—and then you really can have fun."

So I acquired an enlarger—a second-handed one that cost only $25—and a few more containers of chemicals and some additional paper and equipment. There was no instruction booklet with this outfit, but my friend spent a couple of hours with me, showing me how to make enlargements, and suggested a few simple textbooks on the subject.

The problem of a dark-room in which to work was solved easily. I just pushed the fly-tying materials and books to one side and set up my photography outfit on a table in my den, pulled the curtains down tightly, and went to work. Because the curtains leak light, I still have to do my work at night, but that's the most convenient time anyhow.

There is no particular point in going into details on the equipment needed to develop films and make prints. Inexpensive kits that include everything necessary can be purchased in any camera shop, and the instructions that accompany them can be understood by any beginner.

I'd like to suggest a few general pointers, however. You will find them all listed in the instruction booklets, but the average beginner is apt to overlook them.

1. Select a type of film that produces good results, and stick to it. (I like Verichrome for my 620 cameras and Plus-X for my 35 millimeter). All films have speed ratings. By using the same types of film all the time, you



Here you see all the chemicals and apparatus the amateur needs to develop his own negatives and make his own prints. The Photo-Lab, by Eastman, costs only a few dollars. The whole kit fits into the metal box in the background, and the box also serves as a contact printer.

learn quickly just what you can do with your camera.

2. Use a fine grain developer to process your negatives. This is absolutely necessary if enlargements are to be made. In fact, it also makes possible sharper and more pleasing contact prints (which are prints the same size as the negative, unenlarged).

3. Absolute cleanliness is a must. Trays which hold chemicals must be thoroughly washed after they have been used. The hands also must be kept free of the various chemicals. The lens of the enlarger (and certainly of the camera) must be kept free of dust. Films must be handled with great care to avoid scratching and finger-marking.

4. Fresh solutions always produce the best results. At the most, the chemicals needed to develop a film or to make a dozen prints cost only a few cents. These chemicals become worn out and polluted as they are used. It's false economy to over-work them.

5. Photographic paper is made in a great variety of weights and grades. Each one is designed for a specific purpose. The amateur must learn these before he attempts to make pictures.

6. Uniformity is greatly to be desired in photographic prints that are intended for an album. The wise beginner will decide in advance what size he likes best and will look best in his collection. If you want a suggestion, I make all my prints four by five inches. I seldom use a contact printer anymore, but rather enlarge both the 620 and the 35 millimeter pictures to that 4 x 5 standard. Four prints fit nicely on each page of an album the size I like.

7. Don't hesitate to consult the owner of the camera store in your town about any problems that may arise or difficulties you may have. He knows the answers, in the first place. And, secondly, he is genuinely interested in helping you to get good results.

The enlarger is a wonderful instrument. It enables the amateur to make real pictures out of very ordinary films.

A camera lens covers a lot of territory. It sees far into the distance and a good way to the right and to the left.

Suppose you take a picture of a friend of yours with a nice trout in his hands. You get as close to him as your camera will permit, and yet when the negative is developed the figure of your friend is pretty small against a background of bushes or rocks or something else that has no importance at all in the picture.

If you make a contact print from that negative, your finished picture is the same as the negative—you have a lot of background and very little real subject.

But the enlarger enables you to "blow up" the image and fill the picture with it, cutting out all the distracting background except a little bit that serves to give atmosphere to the print.

Or suppose you take a picture of a stream scene from a distance, because it is physically impossible for you to get close. With the enlarger you can "blow up" the image and get a good big print.

There's still another advantage to making your own pictures. You can make as many of them as you wish to give to your friends. You'll enjoy doing that, too.

What's New

Reviewed by Hugh Johnson

in Fishing Books

CAN A FISH see around corners? Does the trout see the fly before it hits the water? In what species does a mother fish become the father of her own granddaughter? Do fish make love—and blush during the mating season? The answers to these and many other questions will be fond in that captivating volume *The Life Story of the Fish: His Morals and Manners* by Brian Curtis, published in January 1949 (Harcourt, Brace and Company, 383 Madison Ave., New York—$3.75). A wise, witty, readable, and scientifically sound dissertation on our friend the fish, how he lives, loves, and conducts himself, how he sees, hears (yes, fish have ears that really work!), feels and smells, this book is delightful reading for anyone. And for the angler who would, for his greater fishing enjoyment, know the ins and outs and the full personality of the finned object of all his efforts, *The Life Story of the Fish* is manna indeed. Fully illustrated, 296 pages.

YOU WON'T CATCH a sea cucumber in the streams around Bellefonte, nor is there any danger of your being snatched by a man-eating clam on the Brodheads, but if you enjoyed James Michener's *Tales of the South Pacific*, and if you like exciting reading about real adventures in far away places, you will thank me or whoever gets you to read *Fishing in Troubled Waters* by Wilbert McLeod Chapman, published in February 1949 (J. B. Lippincott Company, E. Washington Square, Philadelphia, Pa.—$3.00). It's a he-man saga of the trawler *Crystal Star* bearing Dr. Chapman, an ichthyologist by profession, an associate, three G.I.'s and a crew of Melanesian natives, through the Jap-threatened waters of the South Pacific and through red-tape snarls of their Army and Navy sponsorship, as they sought to establish native fisheries to supply food for the military forces stationed on the islands.

"DIKE SMEDLEY'S *Fly Patterns and Their Origins* was published several years ago, but "any book that you haven't read is a new book," and I'm entering this note on "Dike" Smedley's book on the off chance that some readers may have missed it. It's a history of hundreds of popular flies, together with interesting notes on how they are dressed and who first tied them—a thoroughly unique volume containing fascinating information that is not available between the covers of any other one book—unless you are lucky enough, which I am not, to possess a copy of that rare collector's item, that "Hope diamond" of angling literature, *Favorite Flies and Their Historics* by Mary Orvis Marbury (published in 1892). Anyone know were I can get one without taking out a second mortgage on the hut? Anyway you *can* get the Smedley book for $2.50 at Westshore Publications, Muskegon, Michigan.

Pennsylvania Fish Law Violations

Cases Settled During the Month of February 1949

Allegheny County

Eiler, Lester, 316 Church St., Bridgeville, Pa. Operating a motor boat without a license $10.00

Cambria County

Henderson, John, Jr., Dupont Place, Johnstown, Pa. Fishing without a license 25.00

Delaware County

Lapkiewicz, Edward, 1302 Honan St., Highland Gardens, Chester Pa. Fishwithout a license 25.00

Indiana County

Smith, Jack, 1317 West Philadelphia St., Indiana, Pa. Polluting waters 100.00

Jefferson County

Craft, Edward L., R. F. D. No. 4, Punxsutawney, Pa. Illegal Possession of fish 100.00

Lackawanna County

Bousell, John. 822 E. Drinker St., Dunmore, Pa. One illegal black bass and one illegal walleyed pike 20.00

Kesge, Willard, 613 Green Ridge St., Scranton, Pa. Illegal walleyed pike 10.00

Lehigh County

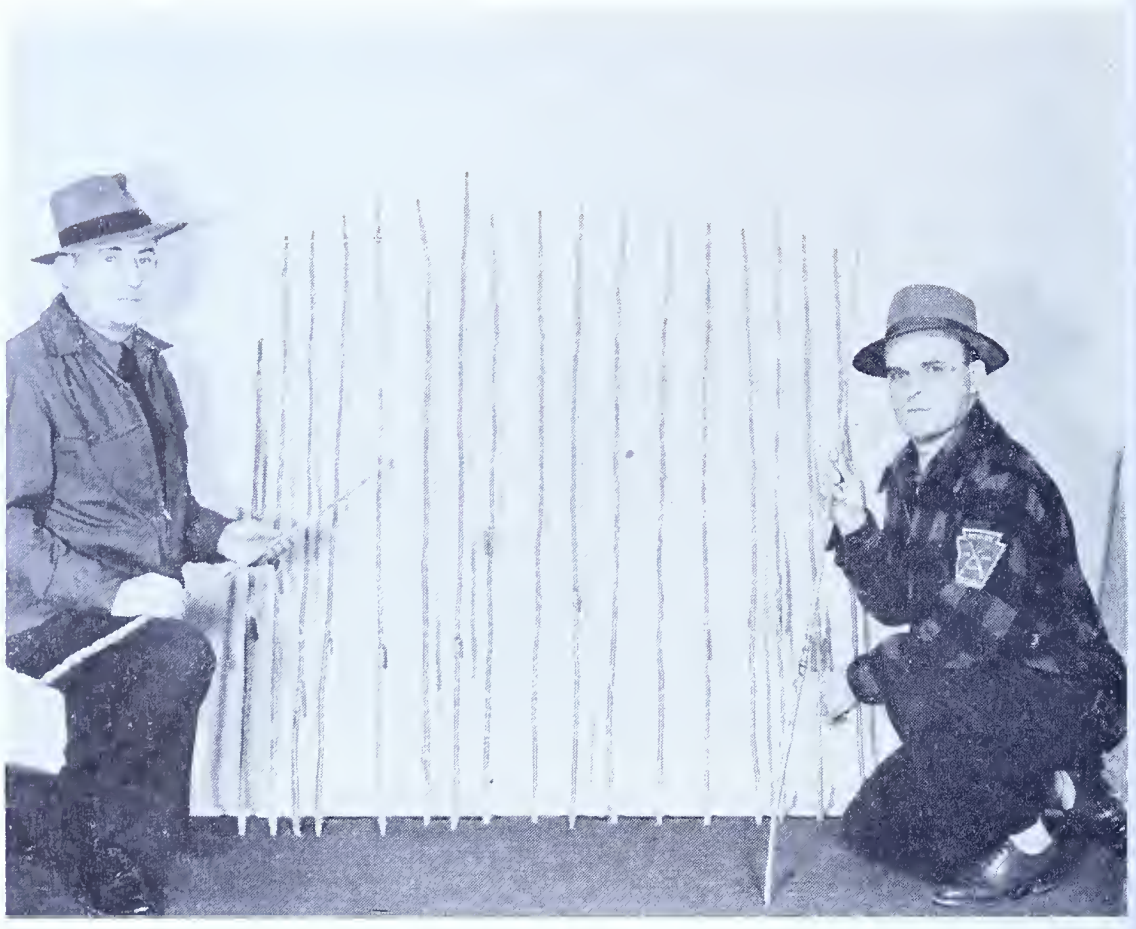
Lorenz, Peter G., 1521 Union St., Allentown, Pa. Exceeding bait fish limit 30.00

Luzerne County

Sadowski, James, 216 E. Grand St., Nanticoke, Pa. Undersized pickerel 10.00



The above proved to be expensive fishing tackle. Two Lehighton, Pa., men paid fines and costs amounting to $424.00 and one served 30 days in jail. This case was settled July of '48, the arrests were made by warden Rayle Hill of Carbon County.



Wardens Ogden and Paul Noel display 19 fishing poles taken from one man found using them in Rock Creek in Adams County. To date the case has not been settled before a court but the fine could be as high as $170.00. Paul Noel gets credit for the arrest as well as many other good works in his district.

Lycoming County

Pewterbaugh, William L., R. D. No. 2, Muncy, Pa. Fishing without license 25.00

Monroe County

Hayes, Freeland, Canadensis, Pa. Using illegal devices 20.00

Rozelle, Victor, Canadensis, Pa. Using illegal devices 20.00

Rozelle, Victor, Canadensis, Pa. Fishing without a license 25.00

Pike County

Davis, Harold, R. D. No. 1, Greentown, Pa. Illegal walleyed pike 10.00

Wayne County

Polt, Alfred, 1222 East St., Honesdale, Pa. Exceeding bait fish limit 50.00

Polt, Robert, 1222 East St., Honesdale, Pa. Exceeding bait fish limit 50.00

Stiles, Harry, Hawley, Pa. Exceeding bait fish limit 50.00

Vargo, Ernest J., 7251 Fort Foote R. D., Washington, D. C. Giving false information to secure Resident Fishing License 25.00

Stream Purity Indicated by Fish Inhabitation Reports Show

The best indicator of the purity of a stream is the amount of fish life in it.

That conclusion came from a report to the Sanitary Water Board from the Academy of Natural Science of Philadelphia in the Conestoga basin in Lancaster County.

The board ordered the survey to determine if there was a better way of measuring the relative purity of streams rather than the present method in use.

That yardstick is the amount of oxygen taken from the water in purifying wastes and the ability of the stream to neutralize acids, alkalines and toxic substances.

Fish Law Upheld

Judge Henry Hipple in Lock Haven today upheld the state fish law of 1925 as being constitutional.

A portion of that law specifies "no one can catch, kill or have in his possession more than 10 trout in any one day."

The case brought to Judge Hipple on an appeal dealt with two brothers, James M Barry and Stanley E. Barry of Avonmore Pa., who were stopped in Clinton County last April and found to have more than a legal catch in their possession.

They were fined $250 and costs and appealed the case on the grounds they had been on fishing streams four days and kept the trout from each day's catch, thus accounting for the number in their possession.

It was the first time in Pennsylvania an appeal had been made on those specific grounds.

Judge Hipple's ruling handed down that morning holds that section of the fish law as constitutional and the appeal of the two brothers is denied.

We believe the general public will back his ruling as sound in principle as a ruling otherwise would furnish a loophole for some fishermen who would claim they were merely holding each day's catch and give them an opportunity to become "fish hogs."

Northern Pike devour almost 9,000,000 wild ducks annually. The legal bag is about 9,000,000 ducks a year.

The Warden Is Your Friend

"Dear Editor . . ."

ame to you Mr. Cosmark

Johnstown, Pa.

ear Editor:

This evening while reading the February ENNSYLVANIA ANGLER, I enjoyed the article alled Killing less means More fish. This rings to mind a little incident that hap- ened between two of my buddies. Will e shall call one and Joe the other, their eal names withheld. Will and Joe went shing one day and fished very hard all ay. Two or there abouts both of the fisher- ien met. Will owned the car and when hey got to the car they surveyed the days atch. Joe only had two legal size black ass, and two nice sized Rock bass. Will had bout 10 chubs, 10 small rock bass. Joe said ie was going to keep his 4 fish as he en- oyed eating what fish he was lucky enough o catch. Will asked Joe if he wanted his, oe said no. At this reply Will tossed his 0 small fish into the woods, as they were good piece from the creek. Then packed ip and went home.

There is a fellow that's a ruination to good isherman. There are twenty fish that should till be swimming around, yet are rotting way in the woods. Why did he catch them f he didn't expect to eat them or give them o someone that enjovs fresh fish? One man 0 fish, 1,000 men 20,000 fish that could be ncreased to 60,000 if left to live. That gentle- nen is why Pennsylvania is without fish.

You've asked for contributions for the ANGLER. Here is my first which I am hoping ou'll accept. If you do I may try others, vill you fail me? I get awfully tired seeing hose little lines Texas Game and Fish, we're n Pa. remember. I've tried asking others o write: What for they say they'll never rint it, I will know for sure now if it isn't rue, boy will those guys get a razzing. But f it is nice to have met you Mr. Penna. Angler

With lures of best wishes

Vince Cosmark

Editor.—Fishing in Penna., Timbucktoo or Swamp Pond, Texas is fishing. If an article its in the categories of: 1. Good reading. 2. Education. 3. Conservation or in some other way seems interesting we can't see what locality has to do with it, because—well see what it says right after "Editor"

• • •

Mr. Smedley knows too

Muskegon, Michigan

Dear Editor:

It is sometimes hard for me to under- stand why I make myself, a self-appointed one-man committee to prevent the improper dissemination of knowledge on angling.

I guess it is because there has been so much mis-information passed out that people can hardly tell the difference between cor- rect information and incorrect information. Don Shiner's article on page 16 in the Feb- ruary issue of the PENNSYLVANIA ANGLER is a startling example. He discusses the turtle knot.

There is no such knot, never was any such knot and never any reason for naming that particular knot the turtle knot.

My supposition is that sometime in the not too far distant past, a printer made an error, that the error was copied and re- copied until it became common.

The knot described by Mr. Shiner is the Turle knot and was named after its early user, if not originator, Major G. W. Turle, of Newton Stacey, England. Mr. Turle, a pioneer dryfly fisherman, died just forty years ago.

Very truly yours,

Harold H. Smedley

Editor.—Mr. Smedley is the author of "Fly Patterns and their Origins" a very well written and informative book that is highly praised by some of the best critics—Mr. Smedley knows whereby he speaks.

• • •

Wylie is sharp-eyed—and hurt

Jersey Shore, Penna.

Dear Editor:

In the February issue of the ANGLER in the article by Donald S. Shiner—"Killing Less Means More Fish" I think someone is all wet and I don't mean me.

He states there is only 100 feet of shore line for each fisherman, and he caught the same 14 inch "brookie" 11 times. What's the matter didn't any one else fish in his 100 foot zone, or didn't they use the right kind of bait? I noticed in the photo of Mr. Shiner that he had a creel on his back and a can (or is it a dry fly cage) strapped to his belt.

I read his article four times, and my con- clusions are that, 1. The only sportsman in Pa. is—well you guess. 2. He advocates flies and no creel, yet there's the photo, and photos don't lie, or do they.

Very truly yours,

Wylie L. Henry

PAT AND MIKE AND THE RAINBOW TROUT

(*From page* 6)

some real tackle busters on our hands some of these days. For that happy climax, we will just have to wait and hope.

If this pleasant prospect should ma- terialize, we will have in these small ponds, a situation somewhat akin to that of the southern bass-bream com- bination, excepting only that the rain- bows will be, most likely, unable to spawn.

It seems to me that Pat and Mike made a substantial contribution to the science of trout culture the day they ran out of breath.

GOOD OLD AMERICAN FISHING

(*From page* 9)

put them down for the day; a heavy wet-fly line would frighten them into their holes on the stream banks for hours; an average day's treatment by an average consignment of American anglers fishing the American catch-as- catch-can style, would frighten all the fish to death in a single day; and their descendants or replacements would probably turn into night feeders, of no sporting use to the angler. So it is probably just as well that the trout fishing is not open to all. For as be- tween no fishing at all, and fishing only for the few, it is clearly better to have the latter and hope to be included.

One of these days, I'm going to make use of all those invitations I picked up over there, or wrangle replacements for them. But for a steady diet I'll take my trout fishing American style—on Pine Creek, Doe Creek or—well I won't mention those others, and I hope *not* to see you there on Opening Day. —*Tennessee Conservationist.*

THE BROOK TROUT

(*From page* 3)

tive. Casting rods like the extra-light action "Pal" are best for this type of casting.

Bait casting rods for this type of ultra-light bait casting must be equipped with the modern light-weight reel with aluminum spool such as the "Pal." Most of the spinning reels will do a satisfactory job, once mastered.

No matter by what method or device you take the brookie, real pleasure will come only from the sportiest tackle. Here is a fish of the highest type, worthy of respect and proper equip- ment; heavy, clubby tackle deadens the thrills it is capable of imparting.

Fished for properly, the brook trout will win you over just as the champion of any respective species . . . As one oldtimer put it, "God could have made a better fish than the brookie—but, he never did!"

Girls worry about their hats and their shoes. Between the two there's enough to worry anybody.

A dime is a dollar with all the various taxes deducted.

Opening Day

By Bob Moog

(From Game Trails & Waterways)

At last it's close, Opening Day. You've been feverishly biting your nails, pacing the floor and assembling and reassembling equipment all winter, and finally it's the night before. You've made a final check, just as you've already done ten times this same night. Everything must be in order, must be handy and ready for use. Rod, reel, greased line (don't drop it on the floor when it's greased) leaders, sinkers, creel, net, boots, clippers, sharpening stone, hooks, jacket, hat (with flies attached) and license. Car keys, lunch, raincoat (just in case) and extra socks. You've got it all worked out in your mind too—an early start and a quick entry to your favorite pool. Once again the details—a long cast to the tail of the pool and a series of fast, jerky tugs to work the streamer through the pool. By now the trout that's going to flash on the fly is three times as large as he was last December. The last check of equipment is complete and belatedly you stumble off to bed. There your start tossing and twisting, kicking and turning.

Suddenly it's here—Opening Day. You quickly dress and gobble down a breakfast, you'll need it on a day like this. Out you dash to the car with equipment in tow and then you're blowing the car horn at your buddy's house. He's been through the same pre-season ordeal and his moment is here too. The talk is fast, eager and optimistic, speculative and hopeful. You push the old car and soon you're there, ready for the trout.

Naturally you've been reading the newspapers and listening to the gossip so you know the trout are here. You peer around anxiously for other cars and half hope that no one else will show up today. You feel confident but anxious, optimistic and enthusiastic, but still you look for other cars.

Out you jump and start preparing. Up goes the rod, the reel, line, leader, sinker and fly. On go the boots, the net, creel and jacket. Out comes the fly book, the fly box and all other necessary paraphernalia and now you're ready at last.

The water appears black and glassy, dark and cold. Small wisps of mist curl up from the surface and close by an alarmed kingfisher chatters his way up the valley. The silence is severe and you feel alive with anticipation and satisfaction. Your pool is the same as always, and you make a shaky, hopeful cast down to the tail as planned. Somewhere you miscalculated for nothing happens. A second cast brings no fish and even the third sees no action. Again and again, but still nothing. You work down to the riffles and work them to perfection, same result. A crashing in the brush and you look up.

"Hi," you say, "Any luck?"

"Got one, a rainbow, down below in the big pool."

"Any size?"

"Bout ten inches, stocked fish."

"What ya catch him on, streamer?" you ask hopefully.

"Yeah, Mickey Fin. He hit it hard."

The Fisherman goes about getting the rainbow out of his creel and you stumble over. He looks sleek and beautiful, and you plunge back resolved to have one too.

It isn't until you get fifty yards below that you get your come-uppance. He hits with a surprising sock and you play him perfectly. The leader will hold him but you get out the net anyway, you've waited too long for this moment and you want this trout with all the trimmings.

A feeling of satisfaction creeps over you and you start out more determined than ever. You work around a submerged log like a master, and another rainbow is creeled. More fishermen pass by and soon you are aware that mostly rainbows were stocked, that they're hitting red and white streamers and that everyone is doing fairly well. You figure that you need the white on the streamer since the water is still a little murky.

As the sun gets up your luck drops off, so you round up your buddy and decide to try another stream. All of them have been stocked this year and it's really fun. You drive up the country, you go through the same motions and once again you're casting and retrieving, casting and retrieving.

You talk to the natives and some are helpful and some are not. One saw the trout stocked but the next one doesn't say a word. You know they're in here so you don't care what anyone says. The worm boys are doing alright but you're a purist, if a fly won't do it you don't want any. You're penalizing yourself but it's fun.

Lunch on a grassy bank with the water swirling below. Blue sky, green grass and billowy clouds floating overhead. The sandwiches are perfect—you relax on the bank, speculate on the right fly and pretty soon you rouse yourself and start all over again.

By six you have your limit, all nice rainbows. Others haven't done as well and you feel confident and superior. You drive home leisurely. They did a real job and you're thankful. The trout are there, you can fish all around and your hat's off to the commission for an excellent job.

One day to Saturday and you begin to make plans, the same deal all over again.—*Md. Rally Sheet.*



Clarence and Kenneth Wynick of Westfield RD and 3 nice trout from the Cowanesque River in Tioga County. Clarence holds a 21½ inch 3¾ pound brown trout while his brother displays a 21½ inch 3 pound brown and a 12½ inch brookie.



This nice 19 inch brown trout was taken from the Cowanesque River in Tioga County by Lynn Moon of Westfield R. D. last June.

"Women who wear slacks do so to show their independence," we are told. Most of us never notice that.

Man argues that women may not be trusted too far; but woman feels that man may not be trusted too near.

TROUT FISHING TACTICS

(*From page 5*)

the artificial flies which are available today have been copied.

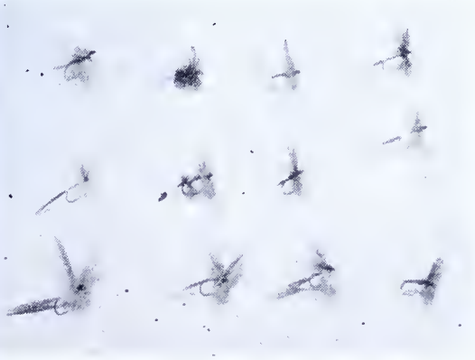
While there is no hard or fast rule as to the right fly pattern to use, it is the best practice to use an artificial which resembles the natural fly on the water at the time. However, as in the case of a 'hatch' of flies where there are hundreds on the water, it has always seemed to me that it is useless to copy the natural bug. The artificial has a slim chance of being taken when surrounded by hundreds of the real insects, some flies radically different in shape, color and size at the time often prove successful.

Brown, rainbow and brook trout will all take an artificial lure as readily as a nautral. Insects which they feed upon in one certain stream are foreign to trout in another stream. From this you can judge that some fly patterns are local affairs but others are good fish getters most everywhere. I have tried over a period of twelve years to cut down the list of flies I consider necessary but haven't been too successful. Just when I had the list cut short I found I needed certain patterns and the list would increase again.

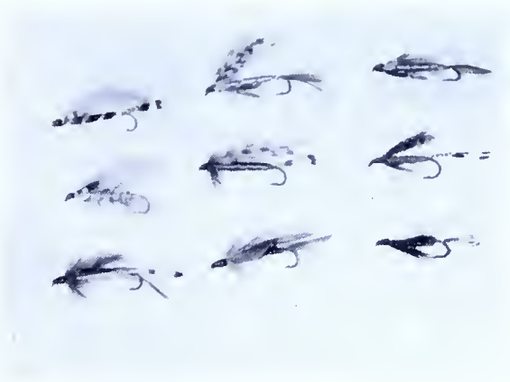
To date I carry the following patterns in the said sizes.

Name of Fly	*Size of Hook*
Cahill	10-12-14-16
Cahill (light)	10-12-14-16
Hendrickson	10-12-14-16
Royal Coachman and R. C. Bi-visible	12-14-16
R. C. Fan Wing	8-10-12
Quill Gordon	10-12-14
Brown Bi-Visible	14-16
Iron Blue Dun	12-14-16
Black Gnat	12-14-16

While each angler has his pets and even may disagree with this selection, I have found it quite satisfactory. Of course, there are others which are good patterns but this list will give you a fair idea as to what is needed.



Dry flies are one of the most successful lures for taking trout.



Streamers, with their bright colors, cause many big trout that have turned cannibalistic to be creeled.

The old discussion whether trout are color blind or not has been cleared recently. A number of articles published by good authorities, stating that they definitely can detect color, especially those of yellow, red and blue and the various sub-shades. Many anglers say they believe trout are color blind, but ask any of them if they would use a scarlet or red ibis fly, even though its size and construction resembles a more subdued pattern, and they would object. If the shape is the same as a fly pattern which is effective and the size is the same, the only reason for the red ibis fly not producing must be due to its color. Hence, trout must be aware of the presence of certain colors in nature.

There are times when trout will refuse a dry fly and yet still be feeding and gorging themselves on underwater insects. At this time wet flies and nymphs are effective.

Nymphs are artificial 'bugs' which closely resemble underwater living creatures—caddis larva, etc. These should be cast up stream and allowed to be carried along naturally by the current. It is rather hard to tell just when a trout has seized the nymph, and unless the angler strikes immediately the nymphs are detected as a fraud and quickly expelled. One method used to detect a striking fish is by greasing the line and leader within a foot or so of the nymph so that they will float. As soon as the floating line and leader twitches or moves unnautrally, the angler should strike as this generally denotes a striking fish.

Wet flies can be fished the same method as described above for nymphs, however, they can also be cast and retrieved in short jerks and by giving them a 'dancing' action by vibrating the tip of the rod. Both methods are effective and should be tried if either one should fail to produce.

Another lure which is effective on trout is the streamer and spinner. These lures represent minnows and should be fished accordingly. However, it is debatable as to whether trout really strike at some of our gaudy colored streamers with the idea that they are minnows. The bright flashes of the tinsel and colorful feathers may insite curiosity in the trout which probably causes them to strike. At any rate they are often effective lures and are the cause of many trout being taken each year. Streamers definitely have a place in the angler's book of tricks when trying to outwit the wary trout.

Whatever method or lure used to take trout, there can be no argument to the fact that trout are the peer of our game fishes.

A red salmon, marked by the U. S. Bureau of Fisheries in Alaskan waters in May, and caught 44 days later in a Siberian stream, was found to have travel 1,300 miles in that time.

Charlie: Was your girl pleased with the bathing suit you gave her?

Herb: Yeah. You should have seen her beam when she put it on!

He: Well, baby, what's the good word?

She: No.

Posted—No Fishing

By Gordon P. Savage

The photograph of tin cans, garbage and refuse was taken to illustrate one of the reasons why many open fishing and hunting lands are being closed.

The "Love Child" who did this little trick drove up to a farmer's property at night and dumped his load of trash. Is it any wonder that land owners post their land?

One cure for this practice of which I heard put a stop to this nocturnal dumping. The land owner learned who had dumped the load and collected it in a large paper carton of a nationally-known mail order house. Knowing that the "Dumper's" wife did business with the firm he mailed the garbage COD for ten dollars. The dear wife never looking at the address on the box, paid the RFD Carrier for as she thought a box of pretties.

A card on the inside of the box read "I am returning your property as I have no use for your trash. I burn or bury mine. The owner of these treasures so carefully placed on my land was located by an old addressed envelope carelessly left amongst the filth and is attached hereto."



The reason for many of these big beautiful "No Trespassing" signs.

With the Outdoor Writers

Dick Fortney
in the Williamsport Grit

Have you ever stopped to realize that much of the pleasure of the first trout fishing trips of a new season is derived from renewing acquaintances with old familiar scenes?

Oh, of course, you were after trout. You were elated if you returned home with a good catch—and you were a bit downcast if fortunes of the sport were not with you.

But at least part of your elation was due to your return to scenes of previous good sport. And your disappointment was eased a bit for the same reason.

You may not have been conscious of it, but you hurried at the first opportunity to that certain "fishy" spot that has always appealed to you. You had dreamed of it all winter, and on this first venture to the trout streams this spring you wanted to try it first of all.

Or you fished just a bit faster than usual to get to that certain pool where you have learned that brook trout like to feed in the shallow dimpled riffle that flows down between two large rocks.

An hour after you started up the stream, you came to that big rock and—almost from force of habit—you laid aside your rod and sat down for a smoke or a brief rest in the warm sun.

Your eyes were alert in the hours that followed for that turn in the creek where an old path showed faintly through the woods and led you to a spring of ice-cold water. You found it as cold and clean as ever, and you drank of its water until your teeth ached with its chill.

Had you given it a bit of thought, you would have realized that you changed from one side of the stream to the other occasionally as you moved along, because you had learned in past seasons of certain obstacles ahead to the comfort of your traveling and the ease of your angling.

You skipped over certain stretches of the stream because experience had taught you that these usually were barren of fish and not worthy of even careless angling.

And some time during the day you came to that memorable pool or riffle—the scene of some fishing adventure that always will stay in your mind. You approached it with the picture of a previous fishing thrill still in your memory—and your nerves tingled with the possibility that the adventure might be repeated.

You kept an alert eye turned toward the bank in areas where you knew you might get a glimpse of a grouse, a deer, or a bear. And you watched your footing in sections where in past seasons you have encountered snakes. You saw wild flowers growing again where they have in the past.

Yes, you went fishing for the first time this year for the primary purpose of catching trout.

But in your soul, too, was the desire to get back on familiar scenes, to renew contacts with nature which are, when all is said and done, a mighty important part of the sport of angling.

The Outdoorsman
in the York Dispatch

Every sportsman who fishes the inland fresh waters of the United States takes an average of 22 pounds of fish per year. This figure is reached by the simple mathematical device of dividing the estimated annual fresh water fish harvest of 260,000,000 pounds by the number of fishing licenses sold, 12,000,000.

When the average person speaks of fishing, he is thinking about some small stream or lake which is his favorite fishing spot. To his mind the fish population is sparse. But all the fresh water in the United States adds up to a vast expanse and the fish in them represent a tremendous quantity of food.

Commercial fresh water fisheries are few and operate on a very small scale. In 1931, the last year that an acceptable survey of their operations was made, they took only 85,000,000 pounds with their traps, haul seines, gill nets, fike nets, etc.

Their operations are said to be dwindling while the sporting anglers have been growing in numbers by leaps and bounds.

Laws and regulations designed to conserve the fresh water fish generally are promulgated and enforced by the state governments. The federal government exercises jurisdiction over fresh water fishing only in Alaska and in certain Federal reservations like national parks.

State laws regulate the time, place, and manner of taking, the kind and amount of fish to be taken. They establish requirements for fishing licenses. They are intended to protect spawning fish and growing young, to maintain a spawning reserve, to distribute the supply among as many anglers as possible and to secure financial support for the administrative program.

These laws are frequently based on the popular notion that overfishing is everywhere the only cause of declining abundance. They fail to recognize such destructive conditions as pollution or soil erosion. Frequently they are based entirely on opinion rather than fact. Sometimes they result in over-production with consequent stunting of the fish.

Hatcheries were developed when it became obvious that mortality among fish is highest during infancy. By hatching eggs and rearing the young under protected conditions, it was believed that a stock of fish could be materially enlarged, sustained, and protected from depletion.

It is still popularly believed that the work of hatcheries is superior to that of nature and is quite enough to preserve our fishery resources against any danger, whether it be overfishing, pollution, predators, water utilization projects or introduction of exotic species.

Experience has proved that in many situations, hatcheries alone cannot cope with these destructive forces. Frequently nature is more efficient than artificial propagation.

It has lately been recognized that hatcheries are most useful for stocking to meet deficiencies.

There are many streams where year around conditions are unfavorable to trout. Yet, these streams will support trout during the trout season. In such places, hatcheries are contributing richly to public recreation through stocking with legal sized fish that have been reared under protection.

Federal hatcheries produce over 100,000,000 game fish annually, and state hatcheries many times that number. Probably in the future, fewer fish will be produced, but planting will be more scientific and more fruitful as knowledge of stocking requirements develops. Future hatchery establishments will rear the fish long past the hatching stage. This will require much more pond space, personnel, funds, and material than in the past but will better serve the growing demands of public angling.

Bob Moog
in the Md. Rally Sheet

The increasing popularity of fishing with the artificial fly has correspondingly activated the hobby of fly-tying, a pastime to which many anglers now fined themselves addicted. In bygone years the local fly-tyers were men of great respect and admiration in the eyes of the fishing populace, but today so many people are preparing their own flies that the old-time experts are practically forgotten. Novices are now instilled with the spirit and know how through schools, colleges and adult recreation courses and no longer have to face the experimentation processes that undoubtedly faced the old master. Large supply houses, simplified and complete kits plus a wealth of literature have greatly aided the beginner and it remains only for him to acquire the master's touch through constant practice. The real beauty though, is the fact that flies tied even in practice will often-times take fish and thereby lend an intriguing fascination to an already interesting pastime. The fact that we all strive for perfection certainly does not deter the beginner before this point is reached.

The art of tying the artificial fly extends far back through the years and the English are generaly credited with being the early leaders in the field. As the methods and techniques gradually spread into the States many tyers accurately copied the English patterns, not realizing that English and American insect species differ in many instances and therefore preparing flies that were not too successful when selectivity was a factor. By selectivity we refer to those particular periods of time when fish seem to select one insect only, and refuse to rise to any other species on the stream. From this extreme the American fly-tyers developed countless patterns, and today the list of standard patterns is indeed tremendous, recognizing that many are carry-backs to original European patterns. From the brilliantly hued Ibis to the dark Black Gnat the tyer can select any color of the spectrum and find a pattern of that color, so broad is the list.

Original methods have seen very little change in that flies are still tied by hand and have not as yet been adapted to machine production. Revolving vise shafts, wing-

holders, whipstitchers and other devices simplify the job today immeasurably, but still do not provide the means of high-speed mechanized production.

While methods have been gradually improved, the greatest advance has been made in materials, notably the hook, which is by far the most important part of the fly. A good hook must be light, strong, correctly tempered and have an extremely strong point.

Because of the stringent requirements not too many firms have entered the market, and today England and Norway are the fly hook centers of the world. Incidentally many of the English hook companies are the same concerns that make needles for most of the world.

The secrets of making the hooks, tempering, pointing, etc., have been handed down from family to family and are actually guarded more closely than many military secrets. People who are prone to disbelieve such a statement might well consider the fact that few American firms have ever attempted to manufacture a fly hook despite a high protective import duty in their favor.

The entire industry in Norway falls under the Mustad Company and new employees are required to perform menial work for some two years before they are actually put to work making the hooks. Even at that, they merely operate hook-making machines, the assembly of which is entrusted to only two men in the country who make the assembly from parts manufactured at various parts of the country. As yet no American firm is a real competitor in the field. Salt water hooks—yes, but fly hooks—no.

The war seriously hampered the flow of hooks into this country and they were very much of a scarcity, but things have picked up considerably since the termination of the conflict.

People interested in tying flies should seek out an expert (and they're not too hard to find anymore) before getting into the field if only as a hobby. The choice of equipment and materials can be wrong and costly, and certainly some sound advice should be secured. For those not able to make such an association (and even for those who do seek out an experienced tyer), I would strongly recommend the purchase of: Professional Fly-Tyers Manual—Herter's, Waseca, Minnesota ($1.50 plus postage) since this is, in my opinion, the finest book on the subject to date. This book covers the entire field and goes on to give interesting side-lights to practically every topic. It is expertly written, highly instructive, and, as far as I'm concerned, a must for every fly-tyer.

The fact that fly-tying is a nerve-tonic as well as anything else is well illustrated by the use to which it was put during the war, when many veteran rehabilitation centers went into the subject on a large scale.

A cockroach was running at great speed across the top of an unopened cracker box, and another one was trying to keep up with him.

"Why are we in such a hurry?" the second one asked.

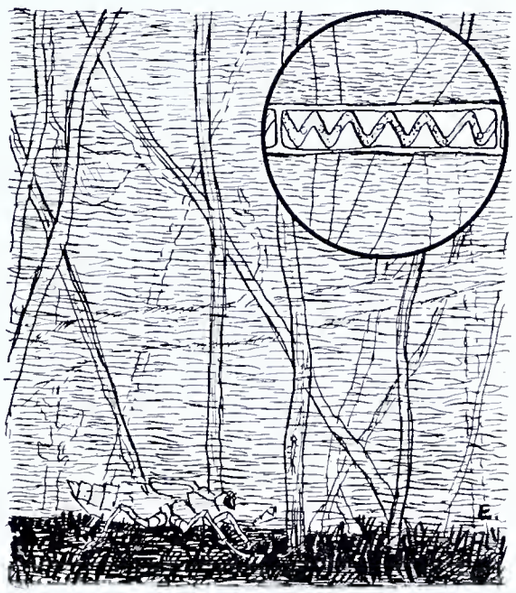
"Can't you see the sign?" said the other. "It says, 'Tear along the dotted line.'"

Water Silk

By Carsten Ahrens

Probably none of our freshwater plants are more numerous than the water silk. Maybe you call it pond scum or frog's spittle. If you have had a course in biology, you'll speak of it as spirogyra. But even though it has many common names, everyone knows what it is. It is plentiful in fresh waters around the world, and in Pennsylvania in August every pool and even the farmer's watering trough will have mats of this plant containing tens of thousands of individuals.

In ideal conditions, water silk floats in the water. Sometimes it is near the surface, again it is almost at the bottom. The masses may be a foot or two across. They are composed of bright green threads or filaments which in turn are made up of cylindrical cells. Under the microscope the individual



cell becomes a thing of beauty for through the transparent cell wall the ribbons of chloroplasts coil uniquely.

On bright sunny days the masses of water silk will be found near the surface. It is a free living plant and so manufactures its food from water and carbondioxide. In this process it throws off considerable oxygen which clings to the filaments in bubbles, and these act as buoys. During dull, cold days the masses will sink deeper into the water and food making ceases and no oxygen is given off. This also happens at night. The bubbles of gas mixed in with the filaments give the masses a frothy or scummy appearance.

Since the water silks are found in the smallest of water holes, it is believed that the wind transports dried cells that become active again when they are dropped into favorable habitats. Undoubtedly wading birds like herons, and wild ducks carry them on their feet from one pond to another.

The water silk belong to a class of plants known as the green algae. We are apt to dismiss them carelessly because they seem to have little economic importance to man. They provide food, however, for all the water animals from the one-celled animalcule to the whale. They also release considerable oxygen which aquatic creatures use in respiration.

Water silks have relatives that are far more spectacular than themselves. There is the blue-green cousin that gives the delicate colors to the hot springs of the Yellowstone; these plants have adapted themselves to living in boiling water. There are the brown relatives of the ocean that have been used as fertilizer, a source of iodine, and as food. These are the kelp and the rockweeds; the giant kelp reaches two hundred feet or more in length. The diatoms are strange relatives that live in transparent limy shells; their remains in the form of great layers of chalk are not uncommon. One deposit in California is over 10,000 feet thick. A red cousin of tropical waters adds beauty to the ocean floor. From the red algae a jelly is extracted which yields the powder, agar-agar, commonly used in many foods and in culture media.

No use worrying about life—you won't get out of it alive.

A sweet young thing saw a beautiful fur coat on her girl friend and asked: "Where did you get that lovely coat? I've been struggling to get one for a long time." T'other lass replied: "I quit struggling."

They say figures don't lie, but girdles keep a lot of them from telling the truth.

New Nylon Torpedo Leaders

A new "torpedo" tapered nylon monofilament leader, especially designed for windy day fishing, is now appearing in sporting goods stores throughout the country.

These leaders, which come in both nine- and twelve-foot lengths, consist of two- and three-foot lengths of nylon monofilament of different test weights tied with blood knots into a scientifically balanced tapered leader which helps overcome wind resistance.

Diameter of the leader at the line end is the same as that of the line. Then the leader is increased in diameter a short distance from the line end and finally progressively decreased in diameter to a small tip size. This places the center balance of the leader about one-third out from the tip of the line which adds power to the cast and makes it easier to straighten out the leader when casting into the wind. It also helps carry the line along with the leader into the wind to give more casting distance and more satisfactory results.

Reports from fishermen say that on a windless day a 12 foot "torpedo" leader can be cast with the same ease and accuracy ordinarily possible with a 7½ or 9 foot untapered leader.

The nine foot leader comes in "2X" and "3X" tapers. The twelve foot leader comes in "1X," "2X" and "3X" tapers of similar construction.

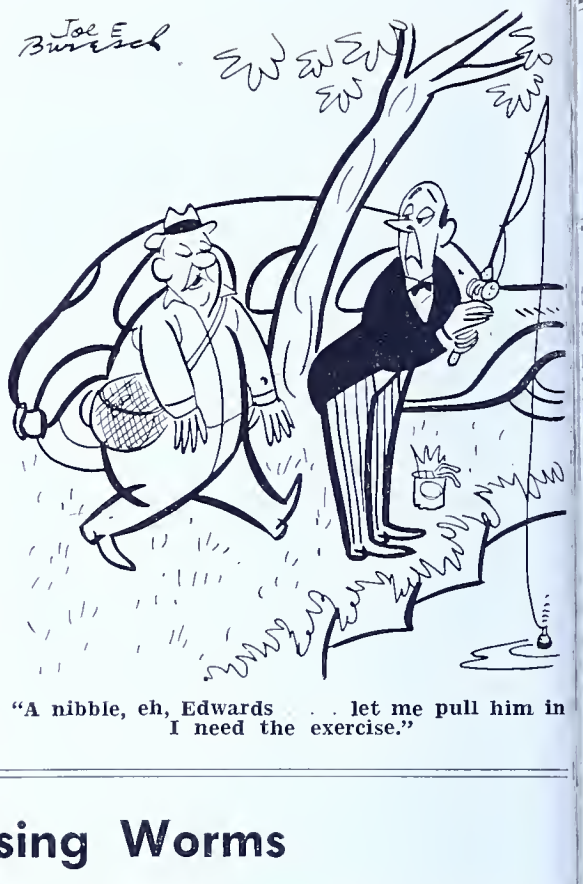
TRICKS IN LANDING FISH

(*From page* 10)

them jump back out of a net because the fisherman netted them wrong. To be sure of your fish staying in the net after you have netted it, always net the fish head first. In other words, bring the net up over the fish's head when you net it, then the spikes on the fish's fins will not catch in the netting and prevent it from slipping all the way down into the net. When a fish jumps out of a net it's because it uses its tail as a lever against the net to force itself out of it. Netted head first it cannot do this because its spikes and fins catch in the netting and hold it in the net.

When netting a fish don't attempt to follow the fish as it rushes around with the net. Hold the net down in the water until the fish swims over it, then bring it up over its head in a quick lift. If you follow the fish around with the net you will only scare it and make it harder to net. Of course there are times when you cannot net a fish head first, and have to net it tail first. When that occurs follow the same procedure as netting head first, only do it fast and do not stop once you have the fish in the net. With one swoop lift the fish from the water to the boat or shore, then the force of your swing will hold the fish against the net and prevent him from jumping out. Some of you may have trouble getting your fish out of the net after he has been netted head first. However, it is an easy matter to remove a fish so netted. Simply turn the net inside out and your fish will fall out of the net, don't try to reach into the net and lift the fish out. tail first, for it will be stuck in the netting.

Of all the fish I've mentioned how to land I've done so with the idea of saving the fish for either the creel or for further propagation. However, there is one large family of fishes that the fisherman must know how to land right to prevent infection from their spikes, mouth, and gills. That is the catfish family. Be they Channel Cats. Blue Cats, Mud Cats, or just plain Bull Heads, they must be landed right or the fisherman may end up with a bad infection or even a few fingers missing. These big cats are nothing to take chances with, especially when they get up around 40 or 50 pounds. If you are a cat fisherman keep your hands away from them while landing them, use a gaff to land them with. I once saw a Mississippi Flathead Catfish that weighed around 60 pounds smash the fingers of a fisherman that happened to stick his fingers in its gills to lift it from a boat two hours after it was caught. In fact I later heard that his fingers became infected and had to be amputated. So do not take chances with a catfish wound, if you are ever scratched or jabbed with a catfish spine, treat it on the spot with some strong antiseptic, then go to a doctor as soon as possible and have it taken care of. But by all means be careful with those cats when you land them, keep your hands away from them by using a gaff. If you can't afford to buy one, make your own. Take a large turtle hook and wire it to the small end of a five-foot pole, after you have trimmed it down with a spoke shaver. With it you will be able to land all but the largest cats without touching them with your hands. A little effort expended to make a gaff may pay off in retaining your fingers.



"A nibble, eh, Edwards . . . let me pull him in I need the exercise."

Notes On Using Worms

By Don Shiner

Worms can be used effectively all through the angling season, however, it takes a real try to catch fish with worms when the water is low and clear. It should be remembered that fish realize this is a foreign food and is only occasionally offered to them after a heavy rainstorm. Such rains bring these 'wigglers' to the surface and some are washed into the stream.

There is a difference of opinion regarding the best type of worms. Some anglers prefer the small ones similar to those found in the sod banks along the stream. Others like the common red worm found in gardens and manure piles. Still others like the large night crawlers, in fact, I prefer these larger worms in pond fishing for bass, or in streams where there are large trout. However, I am inclined to feel that the method of hooking and presenting the worm is more important than the type.

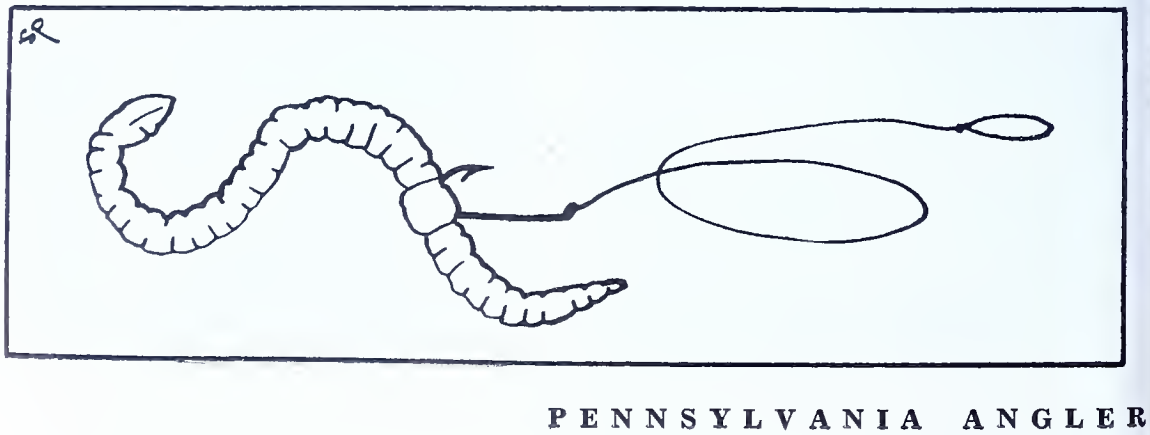
There are several ways of hooking the worms. Placing the hook through the worm near its center, so that both ends are free to wiggle is about as good as any method. Hooking the worm lightly under the collar (see illustration) allows the worm to stretch out and act more natural in the water. This method is ideal, although a little more time should be allowed when a fish takes the bait in order that it gets all of the worm into its mouth. By all means leave the point and barb or the 'business end' of the hook exposed. Some anglers claim the hook should be thoroughly covered for the fish are then less suspicious. This is logical, but it doesn't help in setting the hook.

Sometime ago I read an article relating a method of presenting a worm to wary trout in low water. The angler packed some mud around the hook and worm, and lightly tossed the mud-ball out into mid-stream. As it was settling to the bottom the mud broke away in pieces revealing the wiggling morsel. Any trout in the vicinity seeing this generally snatches the worm immediately. This trick does work and it should by all means be remembered.

Sometimes using two and even three night crawlers on a hook for bass produces when one worm is refused. Bass often prefer food in large amounts and sizable portions.

Fishing worms in streams where there is a current the worm should be cast up stream and allowed to float naturally with the current. In pools, ponds or lakes, the worm can be cast to likely places and allowed to remain stationary a short time and then retrieved slowly. If the bait is allowed to remain any length of time at one place, the worm can become hidden among sticks, silt and dirt. Unless the bait can be seen by the fish, the angler may just as well retain it in the bait can.

Worm fishing can indeed be successful and is often the answer to an enjoyable outing.



THE UNEXPECTED

(*From page 7*)

han cloudy. It seemed to be about as paque as black coffee blended with ich cream. Chet looped on a 9-foot eader with three wets and a split shot o carry them down. I sat on the bank nd watched somewhat disgustedly. We hadn't had a drop of rain for a week at home, only 30 miles to the west, and it had been my expectation of getting some real dry fly fishing. A whoop from Chet drew my attention to where a rainbow was tail walking in protest to wet fly that clung to his lip.

Assembling my tackle I entered the stream above and proceeded to fish the flies slowly and carefully. The first deep glide produced four touches but only one hooked trout which I quickly lost. The next pool hugged the bank and as the cast followed the current it caught for a moment on the bottom. Carefully I lifted it and as it came free the split shot with which the cast was weighted bounced a moment above the surface. A small brown smashed at it the moment it touched the surface. A second time he hit the dangling shot, then I retired to the bank. If a trout could see a split shot well enough to hit why not a dry fly. Substituting a Brown Spider with a peacock body I made an exploratory cast. Smash and I was fast to a brown larger than the one I had seen. The rest of the afternoon was one of those "once in a lifetime days." Trout smashed the little flies through the cloudy water as if they had been fasting for a week. This is one of the few times I have ever taken trout on a dry when the water was cloudy.

A brown lay in the crystal water directly across the pool from where I sat enjoying an after lunch pipe. Three casts with the dry that had preceded lunch had gone unnoticed.

Replacing the dry with a size 6 Gray Ghost I cast above him and brought it across a foot or two in front of his lie. A dozen casts or more failed to bring the slightest notice. Casting almost mechanically I worked the streamer again and again. The only sign of interest came finally in the quivering of his pectoral fins. Expecting him to seek shelter to rid himself of this annoyance, instead he hurled himself savagely at the streamer and seemed intent on dismantling it. His strike was so forceful that he hooked himself and put up one of the finest fights I have ever witnessed. Had he been a bass I would have put down his behavior as sheer cussedness, but a timid trout just don't act that way.

Trout are unpredictable. I've seen them flee in terror from a live black cricket swimming over them and seen them taken on the same bait a quarter mile above. I've almost broken my back creeping up to a certain pool to avoid alarming them only to have the same trout use my booted legs for a breakwater and fed almost at my hip pocket when a hatch was on.

Part of the fun of this business of trouting is the charm of the unexpected.

It was a very determined baby. It had to have its bottle or bust.

STREAM-SIDE LIFE

SKUNK CABBAGE

By ROBERT LEO SMITH

The warm, springlike days that come so suddenly in early March melt the ice in the boggy places, release the earth from its fetters of frost and send the water gurgling in a thousand trickles. During these days you may find in the marshy areas the mottled bronze and green hoods or spathes of the shunk cabbage poking through the cold muck. As these spathes enlarge and the light green leaves unfold at their base, a fleshy spike grows up inside each snug sheet-like hood. Before long the spikes bear pinkish-lavender flowers, the first heralds of spring. As the season progresses, the flowers die, seeds form on the under surface of the spikes, the hoods decay and the leaves spread out to attain an eventual length of one to two feet.

This plant obtains its name from its disagreeable odor which to some people suggests the perfume of the skunk, to others that of crushed onions and to still others, decaying meat.

The skunk cabbage is not a cabbage at all but a member of the Arum family which includes the familiar jack-in-the pulpit or Indian turnip and the calla lily of the garden. Generally, the flowers of the Arum family like shady, damp or wet places, but a few individualists like their feet dry. They are distinguished by possessing flowers clumped together on a fleshy spike, surrounded by a showy bract. There are over fifteen hundred species of Arums, the majority of which are found in the tropics.



About That New Boat

Throughout the country numerous boat and sports shows are throwing open their doors to eager enthusiasts to set the pace for this season's boating.

These shows have assumed such an important role in the life of the American sportsman in the past several years that regardless of where he lives today, he can find a boat and sports show almost in his back yard to concisely preview what will be on hand for boating hours when the season again opens.

There'll be small boats for every purse as well as every purpose and the huge display of small boats and outboard motors which will confront enthusiasts would make King Solomon look for help if he had to make a decision for the best boating pleasure.

The old king wouldn't be alone in his confusion. The wide variety of small boats available today often spells confusion to the novice boater who views the walk-around shows as a future prospective purchaser of boating equipment.

It's easy for him to be misled, but it's just as easy not to be. If you're going to figuratively throw away the oars or paddles and rely strongely on an outboard motor, it's just good sense to narrow your selection down to outboard boats.

The bottom of an outboard motorboat, unlike that of a rowboat, is designed in a modified V shape which gradually flattens out until the bottom is nearly flat at the stern. At slow speeds, with a heavy load, or with a small motor, the V design allows the boat to slip through the water. Given more power, the boat climbs to the surface of the water and planes.

Once he decides to settle on an outboard, there are four basic requirements to keep in mind to make a final selection.

He should be pretty certain what he will use the boat for, what sort of load it will usually be called on to carry, what size of waterway it will be used on, and whether it will be transported often or kept more or less permanently at one place. Once he decides on these facts, the rest depends solely on his pocket book and individual preferences.

If a boat is to be used chiefly for fishing or picnicing, the choice should be a utility boat. Being undecked, this type of boat affords room for casting as well as space for needed gear and passengers. Should he be more concerned with pleasure boating, cruising, or racing, his selection should be made from the runabout line which have sport trim decks, cockpits, and remote steering. Both utility boats and runabouts are available in all sizes and in all materials and construction types

The load a boater will usually carry will determine the size of boat needed, but final choice of size is modified by the size of the waterway where his boating will be done. When boating on small inland lakes with seldom more than two passengers, there is little need to buy a large runabout or utility boat.

If, however, boating will be done on the Great Lakes, along the sea coast, or in any open waterway, a large boat—either runabout or utility—is always the best choice regardless of how many passengers it will carry. A large boat can ride the crests of the waves and will not be tossed indiscriminately from breaker to breaker.

Choice of construction techniques and material employed depends somewhat on the waterways where a boat will be used, but also on how frequently the boat will be transported and in what kind of climate it will be used.

If a boat will not be transported very often, a choice might be made from the many models of planked hulls of batten seam, strip or clinker-built construction. These types of construction are on the heavy side and consequently fare well in open waterways or make a good choice if a boat is to be kept in one place. They can, of course, easily transported by a boat trailer. None of these boats require caulking as do hulls that are merely side-to-side planked and they lend themselves readily to repairs.

Plywood, composition, canvas-covered, and metal boats are extremely light and are easily transported on the car roof for those enthusiasts who do their boating in many places. These materials are all leak-proof, require no soaking, and are especially advantageous for use in dry climates where the seams of planked boats may tend to open frequently. Perfectly suited to sheltered waters, these boats are also available in sizes that are sea-worthy on any open waterway.

All hulls that are shaped like boats will not give perfect or even near-perfect performance. Although construction styles are an important factor, the sportsman is really buying design when he purchases a boat and receives satisfaction. Standard boat builders employ the services of naval architects, and have laboratory facilities for testing full scale models before starting production. Thus they are able to produce a hull for maximum speed, another for use in heavy water, and a third for average use, and know that they will perform as intended.

At the request of the Outboard Boating Club of America, these manufacturers have agreed to uniform transom specifications and the builders of outboard motors have agreed to produce all of their motors to perform at peak efficiency on this standard transom. The show visitor should make certain that these standards are employed by any boat builder whose product he is considering.

Consumer safeguards have been further extended at the request of the Club by means of a horsepower agreement with the motor manufacturers and the boat builders. OBC conducts official and impartial horsepower tests of each model of motor produced by cooperating manufacturers, and approves boats for the maximum size of motor to be used with them. This eleminates guesswork, and permits boat builders to produce models which give the highest type of performance with motors of a given size. Boats so approved carry a small metal plate on the transom, and the motors list the horsepower as OBC Certified.

Show-going guides may be summarized by keeping in mind that boats should be purchased for the design and craftsmanship which they offer, and should be selected for the size of water on which they are to be used, the purpose for which they are intended and for the load they will normally carry.



Al Flick from Sharon caught these three dandies from Tionesta Creek in Forest County last May 10. They measured 24½, 22 and 21½ inches and the largest weighed 6 pounds.



According to Warden Dahlgren this is the largest trout reported from Centre County in 1948. The brown trout was caught by Roy Logan of Milesburg, RD. Vital statistics: Length: 28½ inches, Girth 15 inches, Weight 10 pounds 13 oz., with entrals removed, Place Bald Eagle Creek near Curtin.

The one who thinks our jokes are poor,
Would straightway change his views;
Could he compare the jokes we print,
With those we couldn't use.

PENNSYLVANIA'S

ANTI-POLLUTION PROGRESS

Board Issues New Orders

The Sanitary Water Board has issued an order to South Coatesville to construct a sewage treatment works providing for complete treatment and to have it in operation on or before Dec. 31, 1951. The municipality is located on the West Branch of the Brandywine, one of the famous creeks in the eastern part of the State and one which is used for public water supplies. This action by the Board is in line with that being followed on the Schuylkill River where there is now virtually complete abatement of pollution by silt from the coal breakers, and is in further advancement of the Clean Streams drive.

At the present time South Coatesville has a sewer system divided into four parts. Sewage from one section is treated in the Coatesville sewage works, that from a second section goes untreated to the creek and that from the other two sections goes to two separate treatment plants which are inadequate.

Plans submitted by the municipality, and which have been approved by the Sanitary Water Board, provide for a new treatment works to handle all the sewage from the municipality.

Notices to prepare plans for sewage treatment works or to abate the discharge of the sewage were issued by the Board to the Ardley Bag Co., Lower Frederick Twp., Montgomery Co., located on a tributary of Perkiomen Creek which flows to the Schuylkill River. A similar notice was also issued to West Chester where it is required that plans be submitted for the rehabilitation and enlarging of the two existing treatment plants.

Littlestown Joins Other Communities in Abatement

Littlestown, Adams Co., population approximately 2,500, recently placed in operation its new sewage treatment works, which with the sewers, cost about $385,000. The treatment works makes an outstanding contribution to the abatement of pollution of Piney Creek and to the Clean Streams program. It also presents a telling example of what can be accomplished when a community actually accepts its responsibility to the common welfare. In spite of high costs and the size of the community the people of Littlestown have gone ahead to solve their own sanitary problem and at the same time to abate pollution of the public waterways.

The sewage system and treatment works was built and is operated by the Littlestown Borough Authority. Payment for service is made on a rental basis by the residents. The treatment plant is designed for a population of 3,200 or 350,000 gallons a day. There are 35,000 feet of sewers consisting of eight, 10, 12 and 15 inch pipe. Sewage from one section of the borough is pumped to the treatment plant through 3,000 feet of six inch force main.

Carbon Company Installs System

What is known as a "closed" system which results in the elimination of pollution of the stream, has been installed at the Punxsutawney plant of the Speer Carbon Co., in compliance with the requirements of the Sanitary Water Board.

The company manufactures carbon electrodes for dry cell batteries. In the cutting and grinding of the baked electrodes to the required size, waste water containing fine carbon particles having an intense black color is produced.

The waste waters are discharged to a mechanically cleaned tank or clarifier where the carbon particles in suspension are settled out of the water. The water then overflows to a pump well from which it is returned to the plant for re-use. The settled materials are pumped from the tank to a tank truck and transported to a dump.

The system not only eliminates pollution of the stream but by making it possible to re-use the water in the manufacturing process, has brought a great reduction in the cost of the water supply.

Something New In Refuse Disposal

Investigating complaints of a farmer that household refuse was being placed in the stream near his home, State fish law enforcement authorities launched an investigation. By screening the material, the officer obtained printed matter which furnished clues to the identity of the offenders. Confronted with this evidence, two Chambersburg persons involved admitted the offense and on order of the officer returned to the scene of their activities and performed a thorough stream-cleaning job.

Disposing of refuse by tossing it at the side of public highways from moving automobiles is not uncommon, as even casual observation attests. But disposing of it by dumping it into streams is something new in the way of anti-social behavior. The explanation of one of the offenders involved that he arrived home from work too late to remove refuse to the Chambersburg borough dump scarcely qualifies as a defense.

Aside from being a good example of intelligent investigation the officer's work on the cases brought to attention a practice which should not be permitted to gain headway.—*Chambersburg Public Opinion.*

Engineers Survey Clarion River Pollution

What is the actual condition of the Clarion River from a pollution standpoint and what can be done in the treatment of wastes by industries which cause that pollution? Those are the questions for which answers are being sought by Camp, Dresser and McKee, consulting engineers of Boston, Mass., for the Sanitary Water Board in a comprehensive survey being made under contract with the Commonwealth, approved by Governor Duff. The intensive effort on the Clarion River is being made in promotion of the Clean Streams program because of the importance of the area traversed by the river as a recreational section. The river flows through the famous Cooks Forest.

In the quest for the answers to the pollution problem the engineers have made more than 1,500 analyses covering all phases relating to the condition of the stream and types of pollution from the various sources along the river and its tributaries, including the large paper mill of the New York and Pennsylvania Co., located at Johnsonburg, principal source of pollution. Upon completion of this phase of the work intensive studies will be made to arrive at recommendations to be made to the Board regarding methods of treatment of the wastes to bring abatement of the present gross of pollution of the waterway.

For the analyses samples were procured at 24 established points along the river and its tributaries. They were procured through methods which would provide the material under changing conditions and establish the condition of the river at different flow stages.

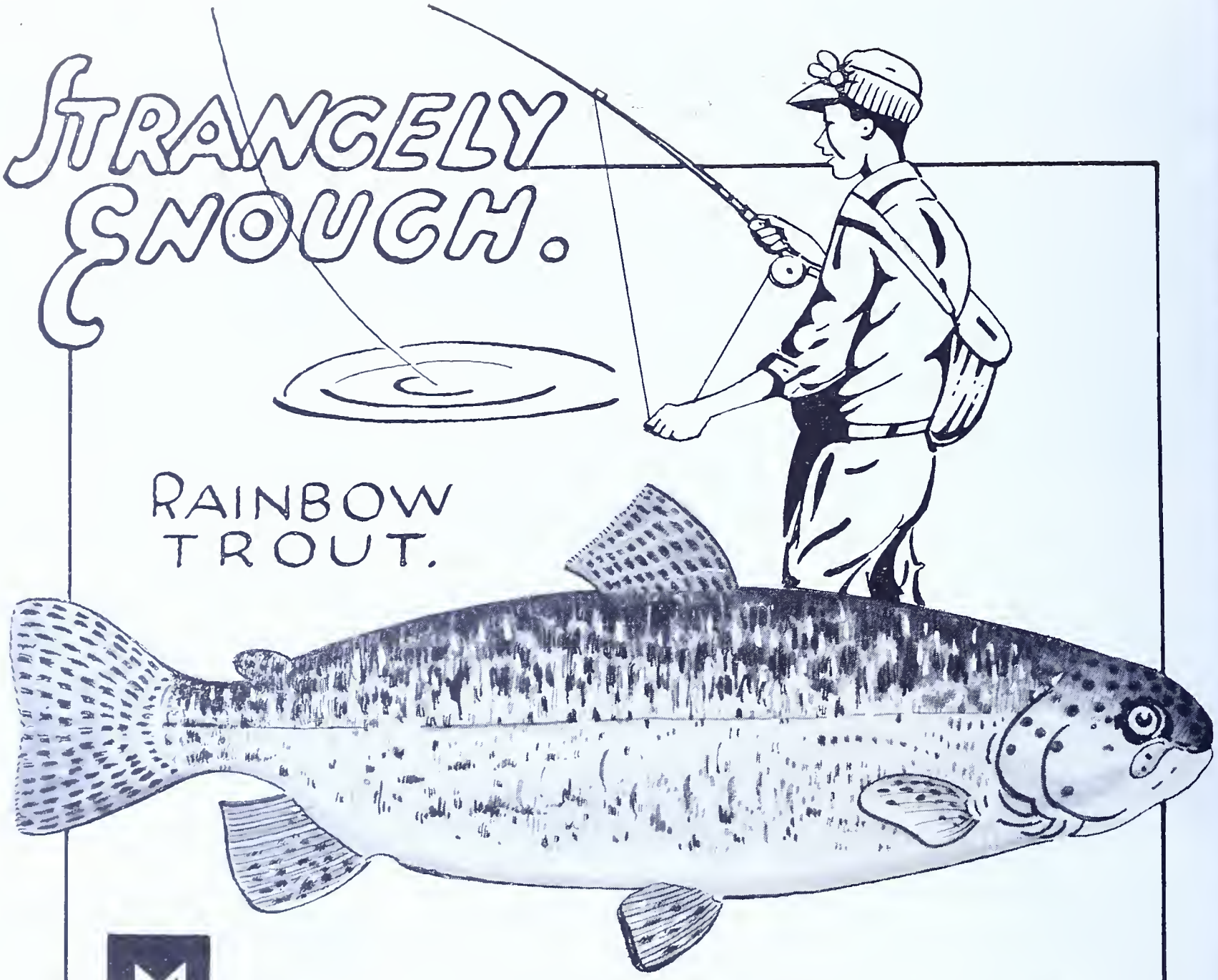
To learn all the necessary factors relating to pollution and to permit of the forming of recommendations for waste treatment many types of analyses were required. These included analyses of dissolved oxygen through which is shown the amount of oxygen that is taken from the stream by the action of pollution and the distance over which pollution extends—analyses of biochemical oxygen demand which establishes the pollution load in the stream—pH analyses which tell if the stream is acid or alkaline—alkalinity and acidity analyses to learn the amounts of either in the stream.

In addition to these tests measurements and analyses were made of the sulfites and sulfides, which are some of the wastes entering the river from the paper mill—the total of settleable and suspended solids which enter the stream and miscellaneous tests.

The survey is pointed to by Dr. Norris W. Vaux, Health Secretary and Sanitary Water Board Chairman, as a good example of the complicated and far-reaching factors which enter into the execution of the Clean Streams drive. "However," declared Dr. Vaux, "these things are being done, answers are being found to problems effecting many types of industries throughout the State, industrial waste treatment systems have already been installed in great numbers, many others are under construction and constantly coming into the building stage and the abatement job is being done. The drive is on for Clean Streams and we are going to have them."

The Clarion River report and recommendations are due to be presented to the Board by the end of March.

STRANGELY ENOUGH.



MANY A FISHERMAN COMES AWAY FROM PROMISING TROUT WATERS WITH AN EMPTY CREEL BECAUSE HE FAILS TO GIVE THIS ACROBAT OF THE TROUT FAMILY CREDIT FOR ITS INSTINCT OF SELF-PRESERVATION. SOME TROUTSTERS THINK THE RAINBOW HAS EYES ONLY TO SEEK FOOD, BUT THE TROUT HIDING UNDER A PROTECTIVE STONE IS QUICK TO CATCH UNUSUAL SHADOWS ALONG A STREAM.

OWEN
PENFIELD
FOX.

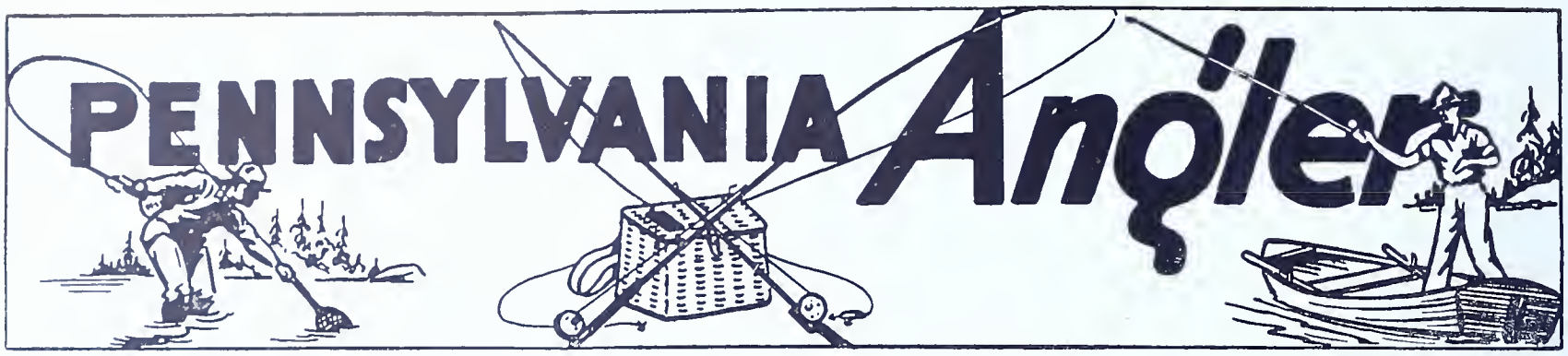
FISHING IS THE FASTEST-GROWING SPORT IN NORTH AMERICA.

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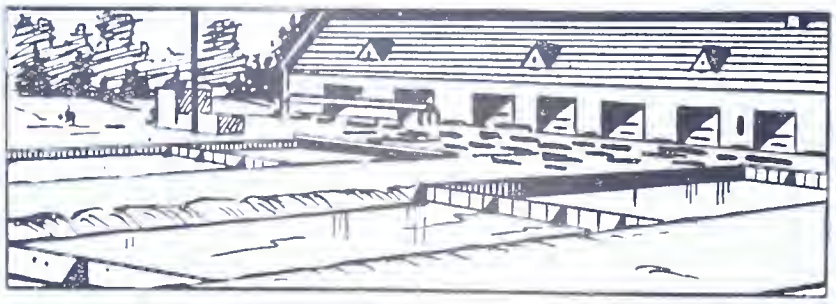
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The Angler

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The Cover . . .

shows a young lady enjoying the wild beauty of Carbaugh Run in Caledonia State Park, Franklin County. This stream is stocked with brook trout. The photo is by Marty Myers.

Fishing Facts

By William H. Pfeiffer

Some one has said that we are all in such a rush that we pass by more opportunities than we ever catch up to. Whoever pronounced those words certainly knew what he was saying.

Thousands of trout were stocked in our streams in anticipation of the opening day. Many of those trout were concentrated right where the bucket carriers knew where to find them at 5 A. M. on April 15, and, as a consequence, a great percentage were yanked out of the holes and pockets of the streams by a highly concentrated army of so-called sportsmen, without any thought of the days and weeks to come after April 15. If we stock 30,000 trout and have 3,000 fishermen, simple arithmetic tells us that there will be ten trout for each fisherman. Ten trout per man are not going to last very long if they are concentrated in a few holes and pockets where the opening day enthusiasts stand shoulder to shoulder, each one anxious to see how quickly he can catch his ten.

Why all the rush? Do we fish merely for the sake of getting ten in a hurry and then proudly exhibit our prowess? Is fishing merely an urge to clean out the streams or is it one of the finest forms of recreation one can have? How much recreation is left for the days to come when we greedily kill our sport in a few opening days or hours? There is not much sport in casting over cleaned out areas of streams. Then the cry goes up that the fish are all caught out—stock more! Why! So we can have another mass migration to the stocked pockets and pools for a mass murder starting at 1 A. M. five days after the trout are put in the streams? In a few days the same cry goes up and no one ever stops to think of possibly a better answer than wholesale stocking. No one is interested in anything but getting ten trout in a hurry. Indeed the rush for ten is so great we pass by many good bets in the way.

Every sane and reasonable fisherman knows that there is usually a good trout or two sticking around the hard to fish places. The reason such trout survive is that they have cover and food. Unfortunately, spots that always harbor good fish are not too pleatiful. Some fisherman has become snagged on some brush or debris and in a fit of anger has torn out the offending material, little realizing that he is spoiling a good location. High water, floods, progress, new roads, bridges, agriculture, all contribute to the depletion of good spots. The result is that most of our stocked trout may as well be placed in an open pond with no hiding places, than to be stocked where many of them are stocked. After all, they are put there to be caught Let's put them where we can get at them more easily. Better still, let's take them direct from the tank trucks and dump them into our creels. That seems to be the idea of many fishermen. However, we believe there is a better way.

You may not agree, but we believe that a little more emphasis on improving what we already have would show astounding results. No farmer expects to graze forty head of cattle in a pasture where the grass is so poor it will carry only twenty head without first improving his forage crops and bringing them up to the greatest productivity. Neither can we carry more fish per mile in our streams until we start to give them better cover and provide conditions that are favorable to food production for the fish. Don't pull out branches, logs, old wire or any material that provides a hiding place or shelter or that will provide a propagating place for insect life. Don't be afraid to spend a little time in making new locations or hot spots. Don't be afraid to roll a few stones or logs or any material into the stream that will make the fishing a little more difficult and give the fish a better chance. In short, contribute a little of your time astream to improving what we have and you will be rewarded many times over.

It may sound radical to many and undoubtedly would increase the sale of hooks and leaders, but we believe that sections of old fence, judiciously placed in our streams would do more to prolong the trout population than increased stocking. Think it over. What can you do to prolong your sport beyond the flurry of periodic stockings?—*From the Franklin Co. Chapter IWLA Sportsmen's Show Program.*

Trout of Pennsylvania

By C. R. Buller
Chief Fish Culturist
PENNSYLVANIA FISH COMMISSION

At the present time there are four different species or kinds of trout found in the different waters of the State, namely, brook trout, brown trout, rainbow trout, and lake trout.

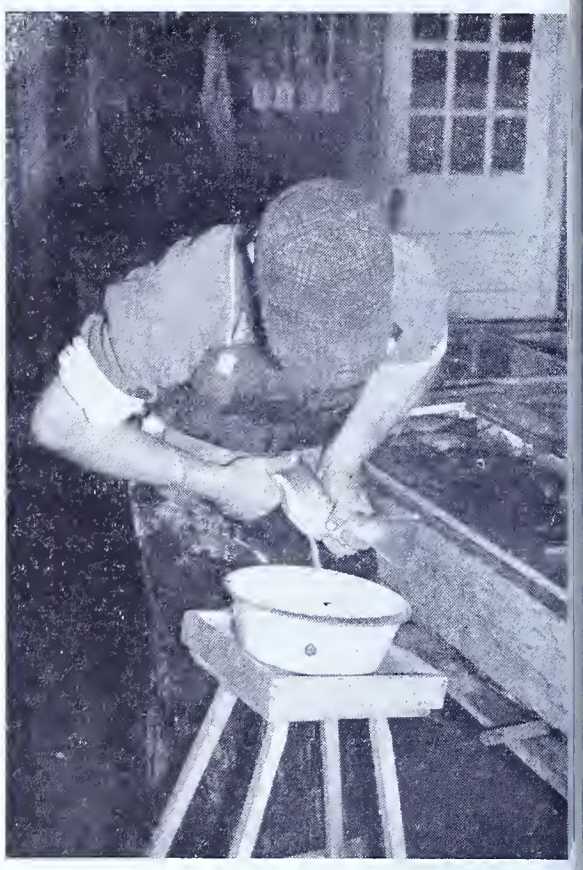
Of the four trouts, the brook trout is the only one that is a native of the inland waters of Pennsylvania. Brook trout were very abundant in streams and many of the lakes in Pennsylvania in the days of the early settler. This native fish of our state requires cold, clean water. The cutting of the timber, careless farm practices, and pollution caused by industries and other activities of man have made many waters now unsuitable for this beautiful gamey fish.

The brook trout spawn or lay their eggs in the fall of the year, generally during the latter part of October and the early part of November. At the approach of the spawning period the parent fish leave the main stream and enter the small, spring-fed tributary streams. Here the female fish digs a hole in a gravel bank in the bottom of the creek and deposits her eggs, which are then fertilized by the male fish. After the eggs are fertilized, the female proceeds to cover the eggs with gravel. Both parent fish linger about the home or nest for several days, then depart and leave the care of the eggs and young fish to Nature.

In the rapid development of our present high standard of living, we have destroyed much of our natural resources, including many kinds of fish and other forms of wild life. The cutting of the timber and other activities have dried up or destroyed most of the small spring-fed tributary streams that were the original nursery or incubator waters for the brook trout.

In the fall when these fish felt the urge to spawn, they sought the small, spring-fed tributaries because during the winter months when the eggs were hatching, the water kept a fairly uniform temperature somewhere between 40° and 50°F. This temperature was favorable for rapid development or hatching of the egg and for the growth of the baby trout. In addition to this, these small streams were not subject to floods during the melting of the snow or spring rains and were endowed by Nature with a supply of natural food necessary for the well-being of the baby fish.

The disappearance of the spring-fed tributaries or the natural nursery waters of the trout has made it necessary for them now to deposit their eggs in the main or larger streams. Under present-day conditions, the water in most of the main streams is too cold during the winter months for the normal hatching of the eggs and the development of the baby fish; and, during the long period that the eggs and baby fish are in the main stream, they are subject to the moving out of the ice, spring floods, roily water, and a number of other things detrimental to them. Those that do survive and develop still face obstacles for when summer comes, the water becomes too warm for the youngsters, and in late summer when the water gets low in most of our streams, all fish have to collect in a few deep pools in order to survive the drought—here the larger fish and animals and birds prey upon the smaller ones. Because of these checks that our civilization has placed on the welfare of our native fish, in order to provide the recreation of angling, it is necessary to grow the fish at fish hatcheries and stock them in the streams. Later on in this story you will be told just how this is done.



Extruding the eggs from a female brown trout.



Brook trout in a hatchery pond.

The brown trout is a native of the British Isles and Europe. In 1883 a consignment of brown trout eggs was sent to the United States Government from a German fish hatchery. A portion of these eggs was allotted to a state fish hatchery in Pennsylvania. These eggs were shipped from Germany in December of '83 and delivered to the state hatchery in Pennsylvania in the very early part of 1884; therefore, this fish was first introduced into the waters of Pennsylvania in 1884. From the offspring of this original consignment of eggs, brown trout were planted or stocked in many streams of the State. In the early days of this fish, it was commonly called "German Brown Trout."

Shortly after the original introduction of this fish from Germany, consignments of eggs were shipped to the United States from the British Isles. In the British Isles at that time this fish was commonly called the "Lock Leven Trout." It is doubtful if there is any great difference between the German trout and the Lock Leven trout of the British Isles. It is said that if German fish were taken to the British Isles, they soon took on characteristics of the native fish; and the same proved true if the trout of the British Isles were introduced to the European continent.

Following the introduction of these fish, it was assumed that they were two different species. However, this is doubtful; but if there were two different species, through hatchery propagation the English and German fish have been crossed and recrossed



Extruding the milt of the male brown trout.

until they have lost their identities and now they are commonly called the brown trout.

Brown trout do very well in the waters of Pennsylvania and in other waters of the United States. Their spawning habits and mode of life are very similar to those of our native brook trout and the factors that have been detrimental to the natural breeding of our brook trout likewise have been just as detrimental to the brown trout.

The natural home of the rainbow trout is in the western part of the United States. At one time these fish were very abundant in streams and rivers of the Pacific slope whose source of water was supplied from the snow-capped mountains; which follows that they are naturally a fish of extremely cold, clean water. In 1883 a consignment of rainbow trout eggs taken from fish of the Pacific slope was shipped to the state fish hatchery at Donegal Springs, Pennsylvania. These eggs were hatched and the fry stocked in local streams in that vicinity. Since that time, various fish commissions and the United States Government have stocked many rainbow trout in the waters of eastern United States. In the beginning, most of these stockings met with failure. This was probably due to the fact that these fish could not survive the high temperatures of our present-day trout waters. As time went on, strains were developed at the various fish hatcheries in the eastern United States that eventually became acclimated to our conditions; and, at the present time, very favorable results are being obtained in stocking the so-called eastern domesticated rainbow trout.

The spawning habits of the rainbow trout in eastern United States are very similar to those of the brook and brown trout, excepting under natural conditions the rainbow trout spawn in the spring of the year and not in the fall. The fry of the rainbow trout that are hatched in the waters of Pennsylvania in the spring have little chance of surviving because of the high temperatures of our trout streams during the summer months and other conditions that are unfavorable for the growth and development of these young fish. At the state hatcheries, through the control of water temperatures and selective breeding, a brood stock has been produced that spawns in the fall of the year. But after these fish are introduced in the wild waters, they soon revert to spring spawning.

Very few of the Nature lovers or anglers of Pennsylvania are familiar with the lake trout. This fish prefers deep, cold, clean lakes and was originally a native of the Great Lakes drainage system. In the early days, it was very abundant in Lake Erie and was harvested in great numbers by the commercial fishermen and sold on the market as a delicacy. As the waters of Pennsylvania changed in direct proportion to the growth and development of industries and agriculture, the lake trout disappeared from all the inland waters of Pennsylvania with the exception of a few deep, clean lakes. Lake trout that inhabit these water areas spend their summers in the deep part of the lake where the water is cool. It is not uncommon when angling for lake trout in the summertime to fish at a depth of 30 to 40 feet.

These fish are fall spawners also. They seek shoals at a depth of 20 to 30 feet where they build their nests. After the young hatch, they scatter about in search of suitable food.

All of you who have studied the early history of the United States know that the early settlers established their homes on the banks of streams and rivers. When these early settlers made their homes by the waterside, they had a purpose in view. The animals that made their homes near the streams and rivers furnished fur for clothing and other purposes. The abundance of fish furnished a stable and abundant food supply, supplemented naturally by wild game and meager farm crops. The water sources also were their most dependable means of transportation. As the population increased, industries and cities grew, and agricultural methods developed, and other means of livelihood took over. Today the fish in our streams and the game in our forests are not looked upon as an important food supply. However, the love of the out-of-doors and the thrill of hunting and fishing have stayed with us; and these two recreations today are conceded to be as widespread as those of baseball or football.

The first advance in our mode of living that seriously affected the natural spawning and development of our trout was the cutting of the timber. This in turn dried up many tributary streams, raised the summer temperature in the water of the main streams to a dangerous point for trout, subjected the streams to floods, erosion, and the like. This was followed in many cases by pollution from industry and metropolitan districts and later followed by serious erosion conditions caused by industries and agricultural methods. As all of these things that were injurious to the aquatic life in our streams were taking place, the number of anglers or fishermen was constantly increasing. As early as 1876 those responsible for our fish-life foresaw that unless some action were taken to assist Nature and to conserve our fish-life, many species including the trout would practically disappear. Their first step in this conservation program was to enact laws governing the taking of fish and other legislation tending toward conserving the supply.

About this time it was found that because of the condition of the waters, Nature could not seed the streams with enough young fish to take care of the demand; and, in order to supplement the work of Nature, fish hatcheries were constructed where fish were hatched and the young planted in the streams. The first fish hatchery in Pennsylvania consisted of a small development constructed in 1873 at Donegal Springs near Marietta, Lancaster County, Pa. Since that time the growing of fish of different kinds for stocking the public fishing waters of the State has grown into a huge industry involving the expenditure of over a million dollars a year and consisting of ten large fish hatcheries scattered over the State. At

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Sorting brown trout to tell their condition as to ripeness just prior to the taking of the eggs.

Shortage of Insects Means Trouble

By Don Shiner

Have you been satisfied with your angling success? Do you plan angling the many years in the future? Watch out, your angling may end next year!

EVERY trout season that appears and then rolls on into history seems to be poorer than the season preceding it. Every year finds fewer fish surface feeding on fewer hatches of insects and today it has declined so much that observing a hatch of flies along a few individual creeks is a rare sight. So rare in fact that it is next door to non-existing.

Don't think for one moment this occurrence doesn't affect fishing! Any ardent follower of fly fishing knows this only too well. Looking at the possible reasons for this slump in insect hatches is indication enough that dry-fly angling is on the verge of being erased from the fisherman's bag of pleasure.

First, try to imagine how hard pressed trout are for food. As a small fry barely a week old they dart about and investigate every minute particle that moves or swirls about with the current. They soon learn that some of these minute particles are good food, have various tastes and they search constantly for those that offer the most pleasing flavor. These tasty foods are minute aquatic insects or nymphs. Some are entirely too large for one small fish to handle; therefore groups of minnows gather about and peck at the food until it is devoured in small tid-bits.

They have been educated to know these minute insects are their chief source of food. Periodically these small aquatic insects wiggle and dart towards the surface of the water. The small fry follow them to the surface and are curiously surprised when the insect pops from its skin or shell with fully developed wings and take to the air and strange world that lies beyond. The fish while nosing among the rocks and silt of the stream bottom find this is where those food creatures live. However, these insects are quick in movement and often dart under such huge rocks that the minnow hopelessly gives up the pursuit. They know their only chance to obtain these nymphs is to watch for them as they dart to the surface. They soon learn too that these insects are somewhat clumsy as they burst through their shells as an entirely different "bug." Often some fall helplessly back to the water and offer good targets to shoot at. The minnows dart upward, grab the insect and then descend with the tasty morsel of food.

As the minnows grow and years pass, this food hunting has continued daily and has taught them it is natural for periods to happen when actually thousands of nymphs emerge at one time from their hiding place among the rocks of the stream bottom. The fish then lie with eyes glued to the surface for these nymphs as they surface to burst forth into entirely different insects. When one tempts them, they dart to the surface and capture it between their jaws much like a pipe smoker inhaling a puff of smoke.

Often one of these tempting insects which cause the fish to bolt upward,



Often the insect that the fish rises to is an imitation fly cleverly constructed on a tiny hook. Through this mistake he often find himself being swooped up in an angler's net.

turns out to be an imitation fly cleverly constructed on a tiny hook. The consequence for this mistake is the end of that fish. We may fight fearsome to spit out the fly that is causing him so much trouble but through expert hands, the fly drags him about in the water and finally he finds himself swooped up into a net and his life snuffed out as quickly as a flame. Being educated to the fact that insects wiggle to the surface and float down stream with the current caused that same fish to loose its life by accepting the angler's offering too, thus he gave the angler the thrill desired.

Today, however, in many streams these natural insects are extinct! Rarely are there any Mayfly nymphs, Caddis larva, Stone flies and other insects found among the streams bottom. If the fish fail to see these aquatic insects rise to the surface they are not accustomed to searching the surface for food.

Oh, occasionally a fly, ant, moth, bee or some other foreign insect will fall on the surface and the fish may spy it and rise. But this alone does not accustom fish to accept the angler's dry flies. Occasionally a few may rise to a fly either a true insect or imitation most any part of the day, but not with the stamina that hatch of flies would cause.

This condition of flyless days and days of poor dry fly angling is caused by the angling fraternities themselves together with various other allied agencies. Unless it is stopped or cut to a minimum, our fly-fishing days will be over!

One of the evils causing this slump



At the end of the angling season, the men hunting for hellgrammites and other fish bait, have the streams' bottoms torn-up so badly from beginning to end that it can hardly be recognized as the same stream. Millions and millions of insects and eggs are killed, thus depriving fish of food!

n insect life is the practice of hunting hellgrammites and other larva in ur streams for use as bait. The would-e-sportsmen wade into mid-stream, romptly place a net in the riffle and crape, dig and upturn every rock in he vicinity in hopes that a few hellrammites can be obtained. What results is a stream's bottom being torn p from the beginning to its end. Billions and billions of insects eggs nd larva are crushed against the rocks r disturbed to the point where they ie. The streams are actually becoming barren of insect life. The fish become malnutritioned and even the tocked fish can not find enough food.

I know of at least a dozen streams n Pennsylvania that had their fishing otentialities totally destroyed and hey can be labeled a "fishless" stream. erhaps once the anglers learn that hese streams are not profitable ones rom the angling stand point, they ill seldom if ever visit them. Peraps those streams can make a comeack if allowed to remain undisturbed. low many years will it take—2 years, years, 10 years, or your life time? doubt whether they will ever become roductive because as soon as they re found to again contain insect and ish life, even on a small scale, swarms f anglers will visit there again and eat the stream down again to the last ope and despair.

You and I digging only occasionally mong the stones for fish bait do a arge scale damage. You may have nly disturbed ten feet of the stream ut stop to realize that the thousands f other anglers do likewise and a ough picture is immediately drawn s to the wide spread and extent of he damage!

The unlawful commercial bait dealer dds to this menace. Night and day hey gouge among the rocks for inects and whisper it along the grapeine that they have hellgrammites for ale at a nominal fee.

Every bait seeker scans the creek nd if he finds a location which has been worked by someone else, he quickly side tracks that spot and departs in pursuit of virgin territory. He realizes that few insects will be found where some one else has dug among the rocks. If he realizes few "bugs" remain, how easily it can be understood that few bugs exist even for future stock.

In some sections of Pennsylvania the hellgrammites have actually become extinct. Along with them have gone the other numerous aquatic insects commonly found in good streams. These streams which have been robbed of their stock of minnows, crawfish, hellgrammites, mayfly larva and other natural insect food offers mighty poor fishing. The few fish remaining are either under weight, stunned growth, or have migrated to better waters (if) any are to be had. Fish can be compared to chickens. If you have a flock of chickens and their food is taken away from them how long can they exist?

Believe me, the statement "Where there is an abundance of feed, there it is good fishing" is true!

Numerous occasions it has been observed that where black-top roads run parallel to a stream, a slight shift of wind blows the hatches of insects over the road. They mistakenly take the road for a creek and swoop down to deposit their eggs among the gravel on the road. A passing motorist coming by crushes the eggs and the future hatches of insects beneath the car wheels, or else they die from lack of moisture.



Walter Guy Turner, age 3, of Emsworth, Pa. Is our practices today preventing him from fishing when he gets older?

Indiscriminate cutting of lumber is another cause to this slump in insect and fish life. A large portion of every stream now flows through barren and open land. Contrast this to the cool shaded streams flowing with banks over-hung with huge spruce and hemlock trees that once existed. Insect life thrives in cool damp places. The water is kept at a cool temperature that encourages fish to stay. Today, however, the streams are so much in the open territories that the sun sends its blistering hot rays into the stream without any interruption. The temperature is raised unbelievably high. The rocks absorb so much heat that it surprises me that the insects which touch them aren't burned to a crisp immediately.

If each angler would carry a small package of willow or cotton wood shoots and stick one here and there at random along the barren banks, in only a short time our streams could be restored to cool shady areas again. This helps prevent erosion and what landowner would not thank the anglers for this one simple but worthy gesture.

The present attitude of would-be sportsmen is to take everything they desire with little or no concern as to what condition our streams or land will be in tomorrow.

Lastly, pollution is another top cause to non-existing insect and fish life in our streams. Although the State is earnestly fighting and showing us the fruitlessness of our corrupt practices, streams are still an unsightly mess.

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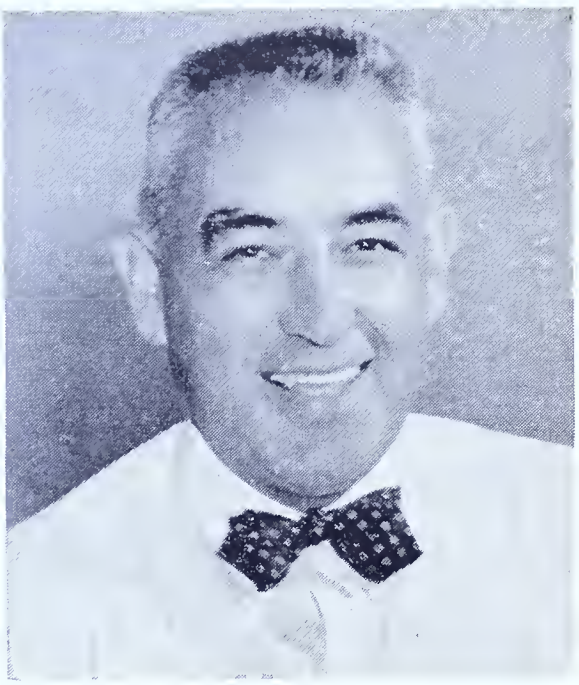
Notice the trout causing a splash on the ower right of the picture. It was jumping for mayfly. This is becoming a rare sight since ur mayflies are one of the insects being detroyed.

Governor Duff Signs New Fish Commission Into Law

GOVERNOR James H. Duff at 11:00 a.m. Monday, April 25 affixed his signature to HOUSE BILL No. 982 and in so doing the Pennsylvania Fish Commission was created to take the place of the old, Pennsylvania Board of Fish Commissioners. The present members of the old Board will continue to serve as members of the new Commission. The Pennsylvania Fish Commission immediately organized and elected the senior member, Milton L. Peek of Radnor, President while Bernard S. Horne of Pittsburgh was elected Vice President. Former Commissioner of Fisheries, C. A. French was elected Executive Director.

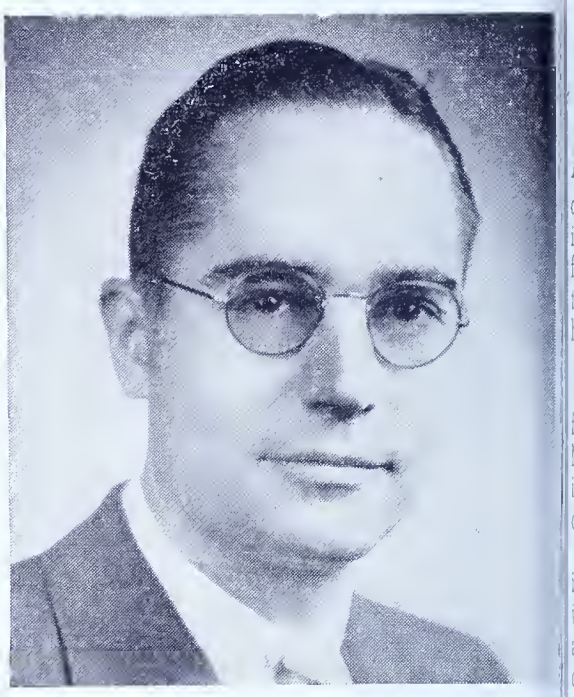
The reorganization of the present State Department is the result of an act introduced in the House of Representatives by the Honorables George Goodling of York and George Shoemaker of Schuylkill Counties which was urgently endorsed by the Pennsylvania Federation of Sportsmen's Clubs as well as many individuals and groups throughout the Commonwealth.

The act will serve to improve and greatly expand the public fishing opportunities in Pennsylvania and is hailed as a milepost of distinctive progress. The members of the Commission are: Milton L. Peek, Radnor, President; Gen. A. H. Stackpole, Dauphin; Bernard S. Horne, Pittsburgh, Vice President; William D. Burk, Melrose Park, Philadelphia; Paul F. Bittenbender, Wilkes-Barre; Clifford J. Welsh, Erie and Louis S. Winner, Lock Haven.



HON. MILTON L. PEEK, President

Mr. Peek, the senior member of the former Pennsylvania Board of Fish Commissioners, who was elected President of the newly created PENNSYLVANIA FISH COMMISSION. A veteran fisherman widely known throughout the state as a fly and plug caster. Mr. Peek is an Advertising Executive in the city of Philadelphia and is associated with the Curtis Publishing Company for the past 20 years. His services as President of the Fish Commission will prove a boon to the administration in the affairs and welfare of fishermen throughout the Commonwealth.



HON. BERNARD HORNE, Vice President

Hailing from Pittsburgh, Mr. Horne is t General Superintendent of the Joseph A. Hor Company of that city. An accomplished fishe man, he is associated with the Izaak Walt League, Anglers Club of New York, Pennsylvan Sportsmen and the Harvard-Yale-Princeton F Chapel. A graduate of Princeton in 1928 he to his post-graduate course at Harvard in 1939 co pleting a special course at the U. of P. in 19 A veteran of World War II he was aboard t ill-fated Nevada which was destroyed at Pe Harbor.



HON. C. A. FRENCH, Executive Director

A native of Ellwood City, Lawrence County, Mr. French has long since been recognized as a pioneer in the culture and development of black bass and warm water fishes. "Charlie," as he is familiarly known throughout the state, is an accomplished fisherman and is a recognized expert in the art of fly casting. Appointed Commissioner of Fisheries on March 30, 1937, he has since that time served in this capacity under four Governors. His election as Executive Director of Pennsylvania's new Fish Commission is a criterion for the continuation of an efficient administration of this important division of the state government.



Governor James H. Duff surrounded by the new Pennsylvania Fish Commission has just signed House Bill No. 982 creating the new Commission which supersedes the old Pennsylvania Board of Fish Commissioners. Reading left to right are: Hon. Gen. A. H. Stackpole, Hon. Bernard S. Horne, Vice Pres., Members of the Fish Commission; Hon. George Goodling, Member of the House of Representatives from York County; C. A. French, Executive Director of the Pennsylvania Fish Commission; J. Allen Barrett, Director of Publicity; Hon. Milton L. Peek, Pres.; Hon. Louis S. Winner, Hon. George Shoemaker, Member of the House of Representatives from Schuylkill County; Hon. Clifford J. Welsh, Hon. Paul F. Bittenbender, Members of the Fish Commission; C. R. Buller, Chief Fish Culturist; Hon. William D. Burk, Member of the Fish Commission and H. R. Stackhouse, Administrative Secretary. Messrs. Goodling and Shoemaker are the sponsors of the new law.

Spiders for Trout

By Dick Fortney

A LITTLE steel hook and a couple of hackles plucked from the neck of a game-cock—fasten them together in proper fashion with a little piece of fine silk thread, and you have one of the most effective trout flies that ever has been constructed.

That's all there is to the spider.

It's not a new fly. It has been used for generations, by anglers who have learned its secret. But it still is an innovation among an amazing number of dry fly anglers.

Maybe it's just too simple, so simple in fact that it has no appeal for anglers who somehow have gotten the idea that a trout fly, to be really good, must be a complicated and colorful thing that represents not only the color and size of some natural insect but also such insect characteristics as segmented bodies and translucent wings.

It's fun to speculate, at the same time, on the question why the spider fly has such a wide appeal to trout of all species.

One expert we know contends that the spider because of its construction (we'll go into that a bit later) represents a tiny natural insect from which light rays are radiating in all directions.

Another spider fan believes that the trout mistake the big, sprawling lure for a long-legged and big-winged natural insect that has fallen helplessly on the surface of the water.

Still a third is willing to argue that trout go after the spider because it is so different than natural insects and other trout flies that it arouses the curiosity of the fish.

The why's are not important. What really matters is the fact that the spider many, many times will take trout when no other floating fly will attract even passing attention.

Let's go into the construction of the spider first.

Two kinds of hooks may be used—either a short-shanked Size 14 or a regular No. 16. Some fly-makers go one step further and insist that the hook be gold-plated as an additional attraction.

The conventional Size 16 hook seems the most practical. It is less bulky and probably (though we never weighed one) lighter than the No. 14 with a short shank. Further, the regular 16 gives the fly-maker more space on which to build his creation.

The tying silk, as the first step, is securely anchored to the shank of the hook, in about the middle of its length.

Then two hackles of similar size are selected. These should be of as high a quality as is obtainable. The longer and more sword-like they are, the better.

Bind one hackle to the hook and wrap it in place, then tie it off. Then bind the second hackle in place tightly against the first one. It will help stiffen the hackles if they are tied back to back on the hook—the first one with its face toward the bend of the hook and the second facing the eye.



Fragile spider flies have accounted for some fine trout at the Fishermen's Paradise, near Bellefonte. The placid pools are ideal for the use of the spider. Trout like this angler is holding abound.

The job may be completed with a whip-finish and a drop of clear lacquer applied, and the spider is built. It's that simple!

At this point, if you are interested in the theory that the spider looks like a tiny insect surrounded by light rays, hold the finished fly up to the light. It does look like that, doesn't it?

Hackles of any color can be used to make spiders, although white ones are rare. Cream and black seem to be especially good hues. Gray (barred rock) is another favorite. Also commonly used is natural red, ginger, and blue dun hackles.

The size of the hackle also may vary. Some spiders cover about the area of a five-cent piece. Others are as big as a quarter dollar. Those of half-dollar size are in demand, and some even approach the dimensions of the silver dollar.

The experienced spider angler has a variety of size, as well as of patterns, for in spider flies as in other types of floating trout lures it is a proved fact that the best tactic often is to switch from one size of fly to a larger or smaller, rather than to a different pattern, when the trout seem reluctant to rise.

There are two basic methods of using the spider. One is to cast it and allow it to float quietly, as with the conventional dry fly. The other—and more difficult—method is to impart some slight extra action to the floating lure.

The spider is not an easy fly to cast; not as easy, that is, as the ordinary dry fly. That is because the abundance of

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A slow, calm pool like this is made to order for the spider fisherman. The fly may be cast and allowed to float quietly with the current. Or the angler may make it jiggle by delicate manipulation of the rod tip.

This Business of Trout Fishing

By Howard M. Ernst

Many books have been published in this world of both an instructive and descriptive nature. Every kind of business and business enterprise, including all the sports of the universe, have been discussed at length. Nevertheless, even this tremendous literary output fails in its entirety to completely cover all the possible angles and degrees of these vast subjects. Hence it is not to be hoped that in this brief article, regarding the business of trout fishing, more than a mere outline can be given.

The point, however, is that trout fishing is a business, a serious business that not only requires mental and physical ability and the tools to work with, but in addition a qualified temperament.

Before one embarks on the adventure of angling for trout, it would be well, nay even essential, to examine one's disposition. If budding trees, fresh green meadows, warbling birds and gurgling brooks have no meaning to you, then fishing will also prove a meaningless pastime. In fact, it will prove to be nothing more than hard work. On the other hand, if, as spring draws near, you do suffer an unutterable longing, a chronic restlessness, a burning desire to uncover your head to its caressing breezes and gaze into the fluffy clouds leisurely wafted across the fathomless blue heaven, then you should venture forth in quest of trout.

As in all business, unless you enjoy the actual work and its environment you cannot hope to ever exceed the mediocre—so it is with trout fishing. If you are not in tune with nature, if woods and fields, streams and meadows and all that are therein are not part of your life, then forego what most assuredly will prove a boring pastime.

Granted that you have been blessed with this priceless gift of enjoying the world as it was given us, you will the better enjoy it if you see to your personal *comfort*. The chap whose mind is not distracted by physical *discomfort*, due to improper attire, is always more alert, efficient and capable than he who wears "linens" in December. The aviator in B.V.D.'s is very apt to go into a nosedive at 10,000 feet and, in fact, probably hopes he'll continue the dive through the earth's crust even to the nether regions in order to more quickly thaw out his frozen limbs. So will you if you venture on a stream in Spring without your "woolies", a good pair of waders or your wading boots.

It is true, rubber boots are less expensive than waders, that is, if you are willing to discount a leg full of cold water and a sprained back or ankle. It is almost a certainty that some alluring spot of water or possibly a rising fish will gently coax you over your boot tops or anxiously rush you stumbling over some slippery rock. The rest of the day will then prove a misery instead of a pleasure. A pair of medium weight waist high waders and a pair of felt sole mule skin wading shoes are essential. I say felt sole, as for all around work they will prove lighter, more comfortable and generally more efficient than the hobnail type. Care should be taken to see that the waders are always drawn up taut by suspenders to prevent undue chafing between the legs and they should also be protected from the shoes by a pair of heavy woolen socks. It is equally important, particularly when wading heavy water or any deep or fast run, that precaution be taken to tightly fasten your waders around the waist. By so doing you may save yourself from exchanging places with the trout; in fact, from possibly drowning.

Now as to clothing, it may be anything you choose, providing it is comfortable and seasonal. Nevertheless, it is wise to keep away from light colored shirts or coats, and it is also well to have plenty of pockets everywhere. Then, of course, as all people who go into this trout business are and must be extreme optimists, a fish container, better known to anglers as a creel, is necessary. The accepted willow basket slung over the shoulder is sufficient, but I recommend a good sized one—first for the big fish and, secondly, for the rain jacket and lunch, if any. Personally, I use a specially made sleeveless jacket of many pockets, one of which is a huge affair located on the left side. A corrugated zinc plate, curved to fit the hip, about 16 inches long and 5 inches wide fits in the bottom of this pocket. The top edge is stitched around an oval hoop of willow. A flap, with a slot cut in it to slip your fish in the "bag" covers the top. This contraption is most serviceable for, unlike the usual creel, it takes little space and can be readily rolled up and easily packed in a valise or suitcase.

Having acquired your business suit, you now have completed your shopping for clothes. In fact, you have done this before locating your place of business, obtaining your stock in trade and arranging for advertising. However, this profession of trout fishing is a little peculiar and the men engaged in it are ofttimes looked upon askance, particularly by their wives. The point is that after selecting your attire, you are going to continue to organize this enterprise in reverse order. Your next step will be the consideration of your tools—the pots and pans and plates and saucers with which you will dish up and present your delicacies to your customers, the trout. The truth is that the business of trout fishing is none other than that of running a first class piscatorial restaurant. Furthermore, I want to state right here that the gourmet Epicurus himself had nothing on Salmo Fario in point of refinement and delicacy of taste.

Bearing this fact in mind, not only must your viands and sweetmeats be carefully chosen, but they must also be daintily served. Therefore, it is essential that attention be given to the selection of your equipment, which in effect are the serving utensils, namely, rod, reel, line and leader. The reel which carries the line is fastened to the butt of the rod. The line is then drawn from the reel and threaded through the guides of the rod. The leader is attached to the end of the line. The rod is used to throw (or cast) the line and leader, at the end of which is a tidbit which you hope to place in front of your waiting customer, Mr. Trout. This may all sound very simple; in fact, mechanically it is not too difficult, but if you really want to run a "Ritz" or "Delmonico" you will have to produce perfect service, perfect food and obtain a perfect location.

To begin with, to prepared and serve your food, your utensils must be of the best quality, whether you are floating or sinking your lure. The rod should not be shorter than 8 feet or longer than 9′6″, nor should it weigh less than four ounces or over six ounces. It, of course, should be well balanced and medium stiff. Inasmuch as over a period of time on any stream you will have wind and weather to combat on the one hand, and a cloudless sunny day on the other, an 8½-foot rod of 5-ounce weight should prove the most desirable. With proper line this implement will handle well in a wind and, if heed is taken to the suggestion of obtaining one with a medium stiff action, it will also daintily toss a dry fly when the storm is over. Incidentally, in the hands of a skilled angler such an instrument will kill fish up to 10 pounds. It is important, however, to have a line that matches the rod in weight and taper. A "C" line, double or single taper will work well. The double taper, of course, is more economical in the long run for it can and should be re-

versed after each season. Do not hesitate to trim the taper according to the requirement of the rod.

Now your customers, the same as most people, are not apt to be interested in food served to them in a sloppy, casual manner. For this reason you need leaders of fine Spanish gut and of varying length. They should taper down to 1, 2 or 3x, and should never be less than 7½ feet in length, and as much longer as you can conveniently handle. Such leaders serve the purpose of keeping the thicker and non-transparent line from the fish's vision, and also makes it possible to drop the fly on the water with the minimum of disturbance. Having acquired such a rod, reel, line and leader you are fully prepared to present your wares in agreeable and pleasing fashion.

Nevertheless, one must never for a moment forget that slovenly manners (fishing), poorly presented merchandise (lures) and careless methods will scare all customers (fish) away and completely ruin the day. It is, therefore, well, before endeavoring to set up business on a stream, to hire out as apprentice, or take a short course of practice in the handling of your equipment.

Practice can be obtained on your lawn, on your roof (if flat) and even in Central Park. Remember your rod does the work impelled by your wrist and that doesn't mean any part of your arm. A whole book could be written concerning the art of casting a fly. In fact, several have been. I will just confine myself here to a few simple important admonitions. On the retrieve or beginning of the back cast, pick up the line smartly but rest when your rod is vertical—no hurry, wait till the line straightens out behind you before you commence the forward cast. This should constitute a well defined flick of the wrist at the termination of which the rod should under no condition be at a greater than 45° angle with your body.

Continuing on, let it be presumed you have arrived at a point where you can throw a fly some 40 feet or more and a customer rises to sample your goods and gets hooked. What now? You must bring him in. How? Why just haul in the line. Well, some fishermen do this—it is called "stripping." I, for one, do not subscribe to this theory. You have a reel. In fact, you must take care that it balances your rod; that is, it should weigh between 6 to 6½ ounces. You must also be sure that it is solidly built, has good bearings and carries 50 yards of braided silk backing spliced to a 30-yard tapered waterproof silk casting line. Having taken all this trouble in choosing this reel, naturally you should, and are going to use it. In fact, I hope the singing music of its whirring spindle will be oft in your ears.

A reel is truly more than a line carrier and rod balance. It is a definite component part of this triumverate. Its tension should be adjusted in accordance with the strength of the rod. This can be done by adjusting the drag so that when the line is pulled at an angle of 45° from the tip of the vertically held rod, the strain, while great, is not sufficient to endanger the rod itself. Truly, it is the combination of this reel drag against the flexed rod that tires the fish and eventually kills him. In playing your quarry from the reel, always hold the rod up and keep your fingers from line and reel while the trout is running, and then, when the opportunity affords, slowly recover the line by reeling.

This is the moment when you must consider carefully the next step to pursue. You have enticed a customer to sample your offerings. Further, you have hooked him and most naturally you wish to keep him. The orthodox method is to gently slip a net over him, head foremost. The most acceptable form of net is the collapsible medium long-handled deeply bodied type carried strung over your shoulder on an elastic cord. This particular form of net may prove expensive. However, any net of suffiicient depth will serve the purpose, and with a little ingenuity you can contrive to satisfactorily carry it by clipping it onto a button or into a buttonhole. The one important thing to consider in nets, outside of sufficient size to comfortably handle a "big one," is to arrange to carry it in a manner so that it doesn't continuously get caught in the brush of the stream bank or whirling around your legs in midstream, trip you and add a cold douche to the day's business. Of course, if you are on a stream with sand, gravel or sloping grassy banks, you may entirely dispense with the net. Under such conditions you may indulge in the art of beaching your fish. I heartily recommend this method of landing trout. It is great sport. To slowly tire your fish and at the psychological moment, just before he is ready to turn on his side, exert a firm shoreward pressure on the line. Then watch him turn his nose toward the bank and as he does, rod held high in air pointing skyward, you also rush up the bank. The fish will follow and, as he thus partially beaches himself, you rush toward him and shove him well ashore. Be sure that during all these maneuvers the rod is kept up and the reel and line free of any encumbrances. This will protect you and the tackle from any unexpected last surge of the trout. Again I say it's great sport and I recommend that all you anglers try it.

However, let us proceed with the business at hand. Working clothes and utensils have been obtained, so the time has come to consider stocking your larder. Your victuals (lures) in this instance will be artificial creations

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Rules and Regulations—Spring Creek Project—Season 1949

OPEN SEASON—May 21st to July 24th, both dates inclusive.

OPEN—from 8:00 A.M. to 8:00 P.M. (Eastern Standard Time) or until Klaxon is sounded.

ALL ANGLERS MUST PERSONALLY REGISTER BEFORE FISHING AND PERSONALLY CHECK OUT AND RETURN IDENTIFICATION BUTTON BEFORE LEAVING PROJECT. NO SUNDAY FISHING.

FISH IN THE POSSESSION OF ANGLER MUST BE DISPLAYED AND CHECKED AT REGISTRATION BOOTH WHEN CHECKING INTO PROJECT. FISH NOT SO REGISTERED WILL BE CONSIDERED AS HAVING BEEN CAUGHT ON THE PROJECT.

ANGLERS MUST PARK AUTOMOBILES BEFORE CHECKING IN AND MUST CHECK OUT BEFORE REMOVING AUTOMOBILES FROM PARKING LOT.

DAILY LIMIT—Only **ONE FISH** may be killed. The Angler must stop fishing after **ONE FISH HAS BEEN KILLED.**

Only artificial lures of hair or feather construction with barbless hooks or regular hooks with the barbs removed may be used. No spinners or swivels permitted.

Fishing with, or possession of, any live bait, angle worms, meat, liver or any other bait, is a violation of the rules and regulations.

SIZE LIMIT—All fish caught from large stream under 10 inches in length and on ladies stream under 7 inches in length must be carefully returned to the water.

All anglers holding a Pennsylvania Fishing License will be permitted to fish five days during the season.

The dressing or cleaning of fish on the property is prohibited as all fish must be weighed when checking out.

POSITIVELY NO WADING—in the stream for any purpose permitted.

Sinkers or lures not exceeding the weight of 2BB Shot are permitted. No casting or spinning outfits permitted.

Feeding fish during fishing hours prohibited. No fishing from bridges permitted.

Assisting in hooking or landing fish prohibited. All foul hooked fish must be carefully returned to the stream.

Violation of any of the rules and regulations will be subject to a fine of Twenty Dollars ($20.00) or confiscation of your fishing equipment, revocation of your fishing license or all three if the Commission deems it advisable.

PENNSYLVANIA REPTILES & AMPHIBIANS

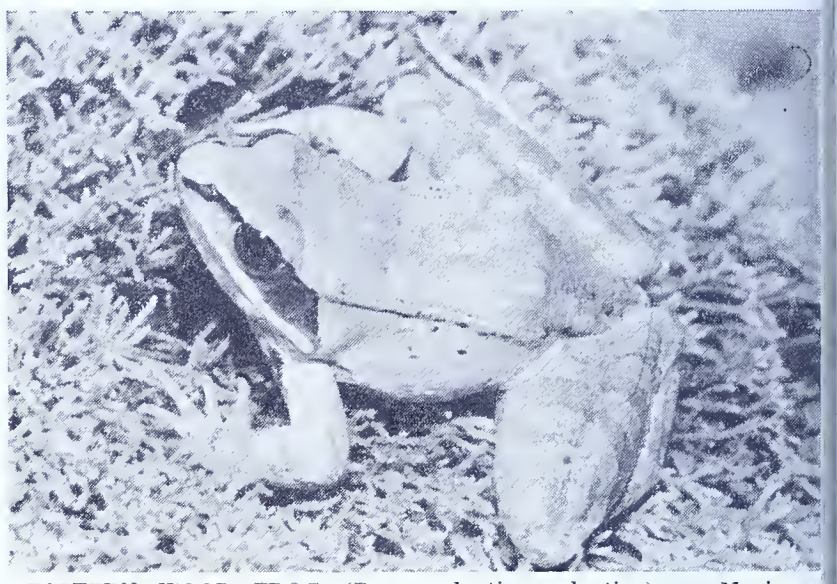
A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

No. 2 . . . . . Frogs



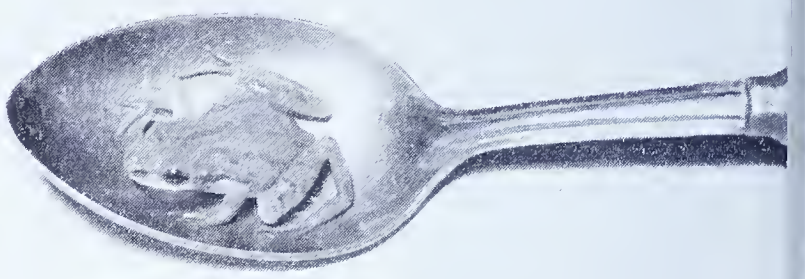
SPRING PEEPER (Hyla crucifer crucifer).....Maximum length 1⅜ inches; probably the commonest frog in Pennsylvania; so small that it requires over 300 males to weigh one pound; females attach up to 800 tiny eggs, singly, to under-water vegetation, starting in March; male's call is piercing bird-like whistle, sometimes heard on warm days as early as January and February; has dark cross on back; state-wide in distribution.



EASTERN WOOD FROG (Rana sylvatica sylvatica).....Maximun length 3¼ inches; prominently marked with dark patch or mask on each side of head; general color varies from dark brown to bright pink wash of light green often present on sides; migrates to water in March or April, associating with spring peepers and spotted salamanders; males "clacking" notes are likened to quacking of ducks; eggs laid in round masses; state-wide.



MOUNTAIN CHORUS FROG (Pseudacris brachyphona).....Maximum length 1½ inches; often confused with spring peeper, but its skin is rougher, foot disks smaller and often has yellow markings on hind legs; male's call sounds like an ungreased wagon wheel; eggs laid in March or April, often in temporary water of ditches; collected in seven western and southern counties only.



WESTERN CHORUS FROG (Pseudacris nigrita triseriata).....Maximum length 1½ inches; marked with three broken longitudinal dark stripes on back; difficult to separate from the EASTERN CHORUS FROG (P. n. feriarum) except by locality; collected in Allegheny, Butler, Forest and Venango counties; probably restricted in Pennsylvania to Appalachian Plateaus region.



LEOPARD FROG (Rana pipiens).....Maximum length 4 inches; greenish or brownish in color with two rows of rounded dark spots on back; lacks orange under hind legs that characterizes Pickerel Frog; takes to water in spring, wanders afield in summer; often called "Meadow Frog"; song of male uttered in low gutteral notes; widely distributed with records from 36 counties.



PICKEREL FROG (Rana palustris).....Maximum length 3⅛ inches; brown with two rows of squarish, dark spots on back; bright orange on concealed surfaces of hind legs; song sounds like grunting or snoring and is often emitted while male is submerged in water; lays up to 3,000 eggs in globular masses; skin secretes a poison which makes it distasteful to enemies; recorded from 53 Pennsylvania counties.

Part One

OPERATION SHAD-FLY

Albert C. Shimmel

THERE is an electric thrill in the angler's world when the magic ws, "The Shad Is On," passes from e to the other. The best chance of te season to hook the big ones on a ating fly is here and anglers may be cused for acting eccentric. One fac- ry executive who draws a large por- on of his labor from a population of glers informs me that it is amazing e number of relatives that find it nvenient to depart from life during is time. One of his most efficient orkers has buried four grandmothers as many years. The boss is anx- usly waiting the coming seasons to certain just how many more there ill be.

The Shad Fly, Yellow May, Coffin y, Yellow Drake or by whatever me you wish to designate it was mous in the literature of angling hile our streams were undiscovered cept by the native children of the ilderness.

My first encounter with the Shad ly came as a boy when at the close an afternoon family picnic I wan- ered to the stream. My new fly rod id a half dozen wet flies with a six ot level leader composed my equip- ent. At the foot of an ancient log am was a deep pool. Imagine my sur- ise and delight when the pool emed to be seething with furious ac- vity as the trout took the long white odied fly with a gusto that set me aking so badly that it was a major ccomplishment to assemble my scant quipment. My anticipation disap- eared as I tried my crude skill. The out fed industriously but ignored my atterns one after the other. One in articular rose within two yards and leisurely that I could distinctly ark his spots and golden flanks. Re- eatedly I cast to him but he refused be put down or change his position. fter almost an hour I grew tired of asting over unresponsive fish, retired a convenient stone and rested. earching through my fly book I found forgotten Rube Wood that had been iven me by a neighbor. Replacing the oint fly of my cast with this pattern I apped it over the nearest rise. A out took instantly and a minute later as transferred rather roughly to the rass. Securing my prize I dapped gain but the luck that had been mine as gone as was the fly. A combina- ion of a pound trout rough strike and snelled fly proved my undoing. The alance of the hatch I could do nothing ut watch helplessly.

The fall of the Shad Fly on some of ur larger limestone streams is a nat- ral phenomenon worth traveling miles o see.

Fifteen years ago with two compan- ions it was my privilege to witness the greatest concentration of my angling experience. The pool was the famous Ledge Pool on Spring Creek about three miles above Fisherman's Paradise. They came in such uncounted numbers that from my station, midstream my companions on either bank less than ten yards away were indistinct. During the height of the hatch it was impossible to cast without killing dozens of them. The water was covered with their bodies and the trout lay close to the surface scooping them in with very little disturbance. An imitation was lost in the storm and taken only by accident. During the hatch which lasted somewhat less than an hour we accounted for only five strikes and two fish. There were at least a dozen actively feeding trout within rod length of my stand, yet so great was the shower of natural food that I doubt that they were aware of my presence. The hatch ceased as suddenly as it had begun leaving the bodies piled in deep windrow in the quiet water and back eddies of the stream.

The two captured trout disgorged a number of insects when captured. Examination showed their throats filled and their stomachs suspended to the point where the walls were transparent.

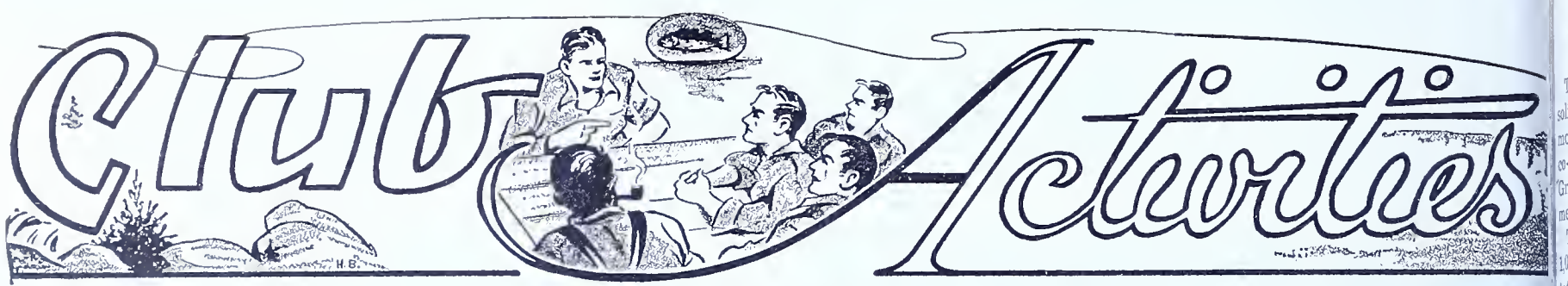
It is small wonder that fishing is poor for days following such a hatch. It has also been my observation that trout taken during the annual hatch are much less spectacular and easier to play. This may be due to the same factors that cause human sluggishness after Sunday dinner. I remember a good friend who hooked a huge old buster in quiet water during an evening hatch. Being a cautious angler he was content to keep a very light pressure on the monster as he cruised up and down the pool. It was rather like taking a well broken dog out for an airing on a leash. Twilight came and the water stilled but my friend continued to walk restlessly up and down the pool in the wake of his trout. Growing tired of the tension the trout came to the surface and swirled. Changing his course he made for a partly submerged pile of drift and in spite of the belated rod pressure heaved himself under and was lost. Had my friend forced the fight from the beginning it is quite possible that this particular trout could easily have been forced into the shallows below and eventually netted.

In going over field notes covering the past twenty years the earliest record of the appearance of the yellow subimagos or "duns" is May 13 which fact is probably due to an exceptionally early spring. The latest observation of the fully matured imagos is June 6. The average first appearance is probably placed at May 18 or 19, which dates are most frequent. I have observed that the best fishing is during the early part of the hatch when the nymphs rise and burst their shucks to liberate the dun. Very often the fly seems to have some difficulty escaping the nymph case and vibrates its wings frantically before leaving the water. This is more than any self-respecting trout can endure.

I had the opportunity to observe the transformation on Spring Creek last season. In a quiet back water adjacent to a good pool the nymphs were rising to the surface. They seemed to rise quietly without any swimming motion. At the surface the nymph bucked a time or two apparently bending at the thorax to force a split in the nymph case. The subimago emerged rather easily and the wings seemed to expand almost instantly. After these exertions the fly floated quietly for a minute or two then laboriously flew to the nearest tree. Many male imagos hovered above the water and mated with the

(*Turn to Page* 17)





Land Owners Given Membership

The Red Bank Valley Sportsmen's Association of New Bethlehem are granting each farmer with ten or more acres of land and living within a radius of ten miles of the borough a free membership in the club, according to Harry Evans.

Directors also approved another Field Day to be held in September.

Tri-Valley Outdoor Club

A shipment of 1,100 brook trout was stocked recently in the Leslie Run section by representatives of the Fish Commission and the club. This is part of the program of stocking that is under way in this section.

Fish were also placed in Drake's Creek and the Stoney Creek area was stocked. Annually, the club is responsible for placing young fish in many streams in this section as part of the fishing season preparations by the state and its cooperating sportsmen's units.

Fishing Club Announces New Catch Contest-Lists New Entry Stations-$200 in Prizes

The Hydro Fishing Club, formed by Pennsylvania Water & Power Company and Safe Harbor Water Power Corporation in cooperation with the Sportsmen's Clubs of Lancaster and York Counties, has mailed announcements of the rules and prizes for the 1949 fishing contest. Because many members of the club fish for Catfish and Carp before the game fishing season opens, it has been announced that the contest for those two types has opened March 1 and the contest for Bass and Walleye will begin in accordance with the regular game fishing season as established by the Pennsylvania Fish Commission. The closing date for the contest is November 30.

As a result of suggestions recently made by many members of the club, the hydro companies have arranged for additional contest entry stations, which will make it more convenient for members to register possible prize-winning fish. These stations are located as follows:

Lancaster County Side of River—Safe Harbor Hydroelectric Plant, Plant Guard on Duty.

Holtwood Hydroelectric Plant—Plant Guard on Duty.

Lyle Simmon's Barber Shop, 354 Locust Street, Columbia, Pa.

York County Side of River—Resh's Boat Sales, 403 Hellam St., Wrightsville, Pa.

Welsh's Boat Yard—Long Level, Pa.

S. M. Fife—General store, intersection Highway Routes 74-124. Airville, Pa.

In order to be eligible for a prize the contestant must comply with all Pennsylvania laws related to the taking of fish and must also be a member of the Hydro Fishing Club at the time the contest entry is made.

The contest is limited to fish caught in the river area from Columbia to the Holtwood hydroelectric plant tailrace. Prizes totaling $200 will be awarded on the basis of: first prize, $30; second prize, $15; and third prize, $5 for the three largest Walleye, Bass, Catfish, and Carp entered in the contest. Awards are made by weight, but in the event of a tie, the larger prize will be awarded to the person catching the longer fish.

There are now more than 700 members of the Hydro Fishing Club. Membership without cost is open to all fishermen, and applications for membership may be obtained from:

Mr. R. E. Fasnacht, Secretary, Federated Sportsmen of Lancaster County, 236 W. Franklin Street, Ephrata, Pa.

Mr. S. E. Suereth, Secretary, York County Federation of Sportsmen's Clubs, 118 W. Sixth Ave., York, Pa.

Medallion to be Erected in Sportsmen's Park



The Punxsutawney Sportsmen's Club will erect at the Sportsmen's Park opposite Punxsutawney a beautiful medallion bearing the nationally adopted Conservation Pledge. The park located on a high elevation covers some 100 acres and has been dvveloped for the general outdoor recreation of the members and friends of this Jefferson County progressive sportsmen's organization. In the picture above reading l. to r. are Frank Harl, President of the Sportsmen's Club, G. H. Ellenberger, Secretary and Roberts S. Philliper, Manager of the Punxsutawney Beef and Produce Company who is presenting the Conservation Pledge to the organization.

Fishing Rodeo Planned Again

The second Better Fishing Rodeo will be held on Saturday, August 27, at Coolspring reservoir, S. Crawford Robinson, president of the Uniontown chapter of the Izaak Walton League, sponsors of the event, announced recently.

Last year, on August 28, approximately 200 district boys and girls took part in the event, which is part of a national affair. Better Fishing, Inc., a non-profit group of fishermen, sponsors the rodeos nationally.

A grand prize of complete casting rod, reel, line and lures is given to each local champion.

Mayor Edward L. Sittle, Jr., said he would be "more than happy" to help in the event.

Club Membership Drive Moves Toward End

The membership campaign of the Consolidated Sportsmen of Lycoming County moved to the 3,390 mark at a meeting of co-chairmen for the drive at the Memorial Grounds Tuesday evening. The goal is 10,000 members.

The report shows an increase of over 1,000 since the last report in February. The total represents 339 membership books of 10 tickets each returned completely filled. There are still 1,261 books in the hands of workers. Under the system this year, no partially filled books will be returned or tallied until the final report.

Regional scores showing the progress of the drive in various sections of the county as well as the standing of the workers competing for the five prizes, will be announced as soon as the figures are available. Mrs. John Whiting, Jr., has charge of compiling the figures. The task involves sorting thousands of membership ticket stubs of members all over the area.

Six rules for enforcement of the campaign slogan were listed. The slogan is "We are hunting for 10,000 members, don't get caught without your ammunition."

The rules are:

1. Carry a membership book on your person when you are out at all times, at work, social affairs, church, etc.
2. Be subject to a 10 cent fine, if caught by a fellow member of the Consolidated Sportsmen, if without a book.
3. Pay the fine to the alert member. Turn in the fine to your co-chairman, its use to be decided later.
4. Make it a point to spend at least 10 minutes every day, asking people to join.
5. Advise fellow workers of potential prospects in their proximity that any member cannot conveniently reach.
6. Don't forget to invite the wives and other members of the family to join.

Clinton County Fish & Game Association

The Association elected officers recently and the new incumbents are: Pres., Robert F. Lindsey of Woolrich; Vice-Pres., Paul P. Cooper of Castanea; Secretary, Donald Stabley of McElhattan; Treasurer, Earl F. Ritter of Lock Haven.

Jerry Walizer of Lock Haven was awarded the scholarship at the Conservation Camp to be held at State College this summer. He won the award by selling the largest number of Association memberships.

It was announced that the Fish Commission has acted favorably on the Club's proposal to set aside part of Cedar Run as a fishing area for women and children only.

Mercer County Federation Sportsmen's Clubs

Elmer E. Brown of New Castle, has been elected president for the 1948-49 term.

Other officials selected were: Earl B. Walker of Conoquennessing, vice-president; Seth L. Meyers, Sharon, secretary; and H. S. Gates also of Sharon, treasurer.

Lebanon County Club Prepares Fishing Pool Near VA Hospital

Sportsmen of the Lebanon County Federation of Sportsmen's Clubs are preparing a trout fishing sanctuary for ambulatory or wheel-chair patients of the local VA Hospital for the annual trout season.

The county sportsmen are giving freely of their time, to say nothing of plenty of muscular effort to prepare a more or less private sanctuary for the hospitalized veterans in the Tulpehocken Creek where it traverses through Myerstown at Railroad Street. They are preparing a log dam to widen the stream and form a pool, and that particular pool is now stocked with game, legal specimen developed at the Tulpehocken Fish and Game Association hatcheries near Halfway.

A ramp will be constructed where a railing now guards the steep stone wall and veterans will thus be enabled to fish from wheel-chairs at the brink of the stream now bounded by the wall just before it flows under the street-crossing bridge.

The project was concluded with a stocking program just recently.

Extract of Timely Interest from Central Division News Bulletin

Once more we would like to make that plea for the help of all anglers in the matter of stream improvement.

Think what it would mean to our streams if each fisherman on each trip to a stream would spend 15 minutes on stream improvement work.

Following are a few suggestions for the improvement of streams. A few years ago a stretch of about two miles on a certain stream in the division was given a preseason going over using several of the suggested improvements. At the opening of the season there was a good bit of adverse criticism but by the first of June it was the most popular piece of trout water in the area.

1. Build a low, loose stone dam to raise the level of an existing pool or to create a new one.
2. Raise the lower or down stream edge of a flat stone and prop it up an inch or two.
3. Roll old logs or stumps into the stream.
4. Cut some willow shoots and stick them into the banks where there are no willows.
5. Bend a tree so that its limbs trail along the edge of the stream.
6. Build a wing wall at a down stream angle with the bank.

If every fisherman would do one of the above things on each trip to a trout stream it would be a wonderful help. In recent years floods have done a lot of damage to our trout waters. Let's try to restore them to their former productiveness.

Consolidated Sportsmen of Lycoming Co.

Ralph R. Holtzman, 331 Howard Street, South Williamsport, was elected president at the organization's annual meeting of directors and officers at the Court House recently. Other officers elected were: Frank Bren, Jersey Shore, vice-president; Roy C. Peterman, second vice-president; Don Starr, secretary; Walter Nicholson, treasurer; Charles Winter and A. H. Hollenbach, representatives to the State Federation of Sportsmen's Clubs.

Essay Contest to Be Conducted By Tioga County Association

The Tioga County Consolidated Sportsmen's Association will send two Tioga County High School boys, one a sophomore and the other a junior, to the State Conservation Camp, at State College, this summer. This camp is operated to teach the conservation of our outdoor resources. Officials of the Pennsylvania Federation of Sportsmen's Clubs, the Pennsylvania Fish and Game Commissions, the Department of Forests and Waters, and Pennsylvania State College, all co-operate to make the time spent in camp entertaining and highly instructive. Boys go to the camp for one week periods. The Tioga County Sportsmen will pay all expenses, including travel, of the two Tioga County boys selected.

The method of determining who will attend will be through an essay contest. Subject of the essay will be "What We Can Do to Conserve the Wildlife Resources of Tioga County." The essay should be limited to 1500 words. Principal basis of determining the winners will be on originality and practicability of the methods and proposals contained in the essay.

Every high school boy, sophomore and junior, in Tioga County is eligible. His paper should be submitted to the principal of the school and should bear no name other than name of school and whether the writer is a sophomore or junior. The principal will give each essay paper a number and retain a record of the student submitting each numbered paper.

Impartial judges from outside the County will determine who the winners will be.

There will be consolation prizes of various items of sporting goods for students who submit papers that are considered by the judges to be runners-up to the winners.

Berks County Federation Sportsmen's Clubs

Recently two new clubs were admitted to the County Unit; viz: The East Reading Rod & Gun Club and the Berks Boating Club. Clubs affiliated with this unit now number 43 with a total membership of 11,878, which may be high enough to put them in second place among the County Groups in the State.

Hillsgrove Fish & Game Club

The Club will give a boy a chance to attend the Conservation Camp this summer. Several acres of corn and buckwheat will be planted to provide game food for next fall. Arrangements are being made to award a prize to the boy and girl who catch the best trout this season.

Seeks Ideas for Choosing Boy

Anthony Lenze, president of the St. Marys Sportsmen's Club, reports that at the recent meeting of the organization it was decided to send one boy to the Junior Conservation school, but they are at a loss just how to select this boy out of 700 others.

Other clubs who are sending boys to the school are invited to mail their ideas as to how they select their boys. The fee for sending the boy to the Conservation school was donated to the club by Brother Jack Speer.

Your Own Fish Farm

Radio Talk on the Old Angler program, station WJAC, Johnstown, Pa., by Dr. R. E. McClure, of the University of Pittsburgh

I AM fearful that I may be casting a heavy fly for the Old Angler this evening and hope that it is not hung up in a spruce tree before the evening is over. The Old Angler is taking a few last shots at the quail and doves in Georgia before he puts his gun away and starts overhauling tackle and tying a few new flies for the trout season.

In the May issue of *Hunting and Fishing* my interest was aroused by an article by Frank C. Edminster entitled "Make your own Fishing—and Good." The article dealt with artificial fish ponds and since that time I have been learning what I could about such ponds and the more I learn about them the more sensible the idea becomes. So when John Crowe asked me to take his program for this evening, it occurred to me that other fishermen might be interested in such a conservation measure.

Fishermen are familiar with the many problems that confront the conservation forces in an attempt to supply satisfactory fishing to an ever increasing army of anglers. They are too well acquainted with the fact that stocking programs yield too easy fishing for the first few days of the season and then unsatisfactory fishing until the stream is restocked. We heartily support the reclaiming of polluted streams and many other conservation measures. These are all desirable but they don't get to the root of the problem. The real problem is to recognize that raising a crop of fish is like raising stock or vegetables or grain. It becomes a matter of proper environment and proper feeding. If a farmer wishes to raise more corn he either increases the size of his field or he fertilizes more heavily or possibly does both. If we are to have a greater crop of fish we must follow the farmer's example. We are already using one of his methods. In a stream we increase the amount of fish-bearing water to some extent by dams and deflectors and similar devices but, to the best of my knowledge, we cannot fertilize sufficiently as the running water carries away the fertilizer. It would be an interesting investigation to determine the effect of fertilizer on the fish population of a stream which extended for a considerable distance through the state without pollution.

By building fish ponds we can both increase the amount of water and can fertilize to the extent that we have real fish cropping, obtaining several times the number of fish that can be obtained from average unfertilized ponds. Unfortunately, the pond, unless it is heavily spring fed, can not be used for trout because of the high summer temperature of the water, but it can be well adapted for large mouth bass and pan fish and will outyield most natural lakes. So if you are a bass fisherman and a true sportsman, one who is interested in increasing the fish population of Pennsylvania, the artificial pond is one of the answers.

How would 100 lbs. of bass and at least an equal weight of blue gill sunfish or crappies per season from an acre of water appeal to you? Especially when it is coupled with the knowledge that instead of depleting the fish supply and thus spoiling the sport of some other fisherman that you are only properly cropping and that the pond will flourish only if you fish it regularly and hard? Perhaps the necessity for regular cropping will be accepted as a valid excuse by that fisherman's widow you so frequently leave at home. She would surely approve of your cultivating a garden a few hours a day. In this case we are raising an aquatic garden in the same way one would cultivate and harvest any other garden. However, harvesting in the aquatic garden is more fun.



"Happy Angler" Meet Bobby Plummer of Portage. Bob is 7 years of age and at Fisherman's Paradise, 1948 season he landed this fine 22½ inch brown trout using a 7 ft. 3-oz. fly rod, the lure was a No. 14 hair fly. The photo was snapped by C. A. French, Commissioner of Fisheries.

The natural question now is how one can achieve this "Fisherman's Paradise." Mr. McWilliams, the Cambria County Farm Agent, tells me that we already have from 75 to 100 farm ponds in Cambria County. Perhaps you know a farmer that has one and perhaps if you put the matter before him in the proper light he will permit you to stock and fertilize the pond and reap a part of the crop. That would be the easiest way. Then the Department of Agriculture is urging farmers to build ponds for fire protection, live stock, erosion control, and recreational purposes. Perhaps you know a farmer who could be encouraged to build such a pond, especially if you and a few friends would volunteer help in building the earth dam and stocking and fertilizing the pond. Or a few fishermen could buy a site and build their own pond. The cost is not excessive. In the proper site the pond can be constructed for less than a hundred dollars. A day or two with a bulldozer is the major cost.

There are three classifications of recommended fish ponds based upon the source of water. A pond fed by a bypass or diversion line from a stream, a spring fed pond, or a "sky pond," dependent entirely upon surface runoff water. The dammed stream is not recommended because of silting, flooding, loss of fertilizer, and other disadvantages.

The pond should be at least one-fourth of an acre in extent, that is just slightly larger than a city lot, or it may range up to several acres. In this section of the country the pond should be eight feet deep over one-third of its area and three feet deep over the remainder. If it is a sky pond a ten foot depth is recommended as the water level may vary by about a foot during hot and dry weather. The site must be carefully chosen to be sure the pond is water tight; a clay substratum is desirable, and an earth dam, properly packed, will be adequate. Detail for the construction of such a dam may be had from the Department of Agriculture or your County Agent. If a sky pond is being built you will need the drainage from 10 to 15 acres of pasture land or from 30 to 40 acres of woodland for each acre of pond area. I suppose that, theoretically, enthusiastic fishermen could build 15,000 one acre fish ponds in Cambria County's 435,000 acre area and we would have plenty of rain to keep them filled.

After the pond is filled with water the problem of stocking and pertilizing

Mr. McNaughton

We received an order for a one year subscription, with cash attached from a Mr. John W. McNaughton who gave the street address of "Main St. Box 115" but somehow forgot to add the town name to the subscription blank. If Mr. McNaughton will inform us of the town name in which he lives, or if one of his friends will do it for him, we will be more than glad to forward his copies of the Angler.

—The Editor

presents itself. Here we have an interesting cycle of food relationships to consider. All animals and fish get their food directly or indirectly from plants which using energy from the sun convert inorganic minerals and carbon-dioxide and water into organic tissue. In a fish pond we have an involved food chain. The bass, after they have reached a couple of ounces in weight, live largely upon smaller fish—in our pond, probably blue gill sunfish. The blue gills feed in turn largely on insect larvae which in their turn feed upon zooplankton, which is dependent upon phytoplankton, algae and similar plants.

The phytoplankton depends upon the sunlight, carbon-dioxide, phosphorus, potassium, nitrogen, and other elements in various forms. If one link in the chain is deficient, the entire chain suffers. In a natural lake or stream the fish population is determined to a considerable extent by the fertility of the surrounding soil. If the soil is lacking in phosphorus, potassium, or nitrogen compounds, as is frequently the case, there is bound to be insufficient food for a large fish population. In the pond this deficiency can be made up by adding commercial fertilizers or various organic materials. This results in a heavy plankton growth, with abundant food for insects which multiply rapidly under such conditions and thus give abundant food for the blue gills and eventually for the bass. In such a pond the growth of the fish far outstrips that in average natural waters; in the southeast a yield of 500-600 lbs. of blue gills or 150-200 lbs. of bass per acre is quite common. Of course in Pennsylvania the yield is lower because of the shorter feeding season, but it is still very attractive.

Stocking the pond must be carefully controlled in terms of the food values of the pond. It has been found that a pond can sustain a fixed weight of fish per unit of area. If the pond is overstocked the weight will be made up of many small fish. If the game fish and forage fish are not properly balanced one group will be small and undeveloped. The recommended stocking for a fertilized pond is large mouth bass and blue gill sunfish or bream. The bass eat sufficient of their own young and of the blue gills to keep the fish population balanced and both types can grow to a good size.

A stocking of about 100 bass fingerlings and 1500 blue gill fingerlings is recommended per acre of pond. If the pond is unfertilized the numbers should be cut to one-third of the above. If desired, 25 crappies may be substituted for the same number of bass or 25 bullheads for 100 of the blue gills. It is better to keep minnows or bait fish out of the pond because when they become too large for food for the bass they compete for food; besides, they are not prized as pan fish as are the blue gills. If the pond is stocked in the fall, by the next fall the blue gills will be of pan size and fishing for them should be started. The bass may spawn the second season and after spawning they may be caught. After fishing is once started it should be done regularly and steadily to remove the larger bass and blue gills. Both must be removed. Such a fertilized pond can scarcely be fished out because the bass population's becoming low permits an increase of the blue gills to the extent that the bass, because of plentiful natural food, become very hard to catch; enough are almost certain to remain to restock the pond.

After the pond is established it requires about 1000 lbs. of commercial fertilizer per acre applied at intervals during the spring and summer months. Also it requires pulling of rooted vegetation from the edges, and best of all, steady fishing. It is rather startling to the bass fisherman to be told that lilies and cattails and other aquatic vegetation should not be permitted in the pond as he is accustomed to taking nice fish from weed beds. However, the weed beds afford protection to the small fish that we want the bass to catch. Also, the weeds compete with the plankton for the fertilizer, and that's bad. The plankton is the basis for our food chain.

Well, I have been able just to outline the advantages of fish ponds as conservation measures and opportunities for sport. If you are interested, there are a number of government bulletins on the subject and articles have been published in various sports magazines. I hope that many of our sportsmen will further this means of conservation and propagation and that they will have good fishing in doing so.

Beautiful New Neighbor: Little boy, I need a loaf of bread from the store. Do you think you could go for me?"

Neighbor Boy: No, but I heard Dad say he could in a big way.

Tests Prove Fish Nutritious as Meat

Fishery foods are as good as meat for the human body.

Tests conducted by Dr. Hugo W. Nilson, pharmacologist at the Fish and Wildlife Service laboratory in College Park, Md., and Miss Shirley J. Wilson, a graduate assistant in fisheries, to show the effect of a fish diet on the red cell count and hemoglobin value of human blood have proven that fishery foods are the equal of meat.

The experiment was made in cooperation with the University of Maryland's College of Home Economics. It was the first of its kind in this laboratory to use human subjects. The results were announced recently by the Fish and Wildlife Service's Branch of Commercial Fisheries.

Six University of Maryland co-eds, 19 to 24 years of age, participated in the eleven-week experiment. They consumed a standard diet of their own choice for three weeks. Blood tests taken once a week during this period reported their red cell counts and hemoglobin values.

During the next seven weeks, four of the girls stopped eating meat, and consumed fishery foods as the big noon-day dish of their diets. They ate fresh-water fish, salt-water fish, and shell fish-broiled, baked, steamed, and fried. The two other girls continued on their regular diets on which meat was a chief item for the duration of the test.

The four girls on the fish diet returned to their standard food fare in the last week of the experiment to provide a second check.

Dr. Nilson and Miss Wilson noted that the red cell count and hemoglobin value of the four girls on the fish diet remained the same as when they were eating meat. The counts and values were the same in relationship as the two girls' on the standard diets during the seven-week period. There was even an increase in the cell count and in the hemoglobin value for the four girls on the fish diets for several weeks.

As a result of his experiment, Dr. Nilson says that fishery foods maintain as good a red cell count and hemoglobin value in human blood as does meat. Hemoglobin is the chemical substance that forms the blood's red color and carries oxygen from the lungs to all parts of the body.

Dr. Nilson says that protein and mineral content of fishery foods is also the equal of meat. Protein and mineral values of all animal foods are probably the same, regardless of species, he says.

Attention! Important!

We are in receipt of a remittance in the sum of $1.00 for a two year subscription to THE PENNSYLVANIA ANGLER. The request is signed by Clinton I. Foote, with no address whatever. If Mr. Foote will communicate with us at once, giving his full name and address, we shall be able to comply with his request.

—The Editor

A pair of disgusted anglers find a place where there aren't more fishermen than fish

Adventurin' for New Fishing Waters

By William Boyd

"I'M about convinced that every lousy trout in this stream has been caught!" This remark, uttered in a loud and disgusted voice, came from my good friend Doc. We had been fishing for a couple of hours on a snappy April morning, and neither of us had a trout in our baskets.

I admitted I felt just as Doc did about that particular stream. And our unsuccessful angling wasn't too hard to understand when we looked up and down the beaten path paralleling that stream. It was clearly evident that scores, perhaps hundreds, of fishermen had been there before us, even though the season was less than a week old.

Then and there was born, so far as Doc and I are concerned, one of the most interesting and absorbing fishing practices we ever followed. We determined we'd endeavor to find a new fishing place, one that wasn't visited by every Tom, Dick, and Harry of the area.

Placing the butts of our fishing rods on the back of the back seat of my automobile and letting the tips stick out of the window of the door on Doc's side of the car, we clambered in and started southward. We passed three normally good trout streams meandering through mountains and farm land but didn't stop, for there were fishermen's cars parked along all three streams. No, sir, we wanted a stream all to ourselves . . . a fishing place known to few, if any!

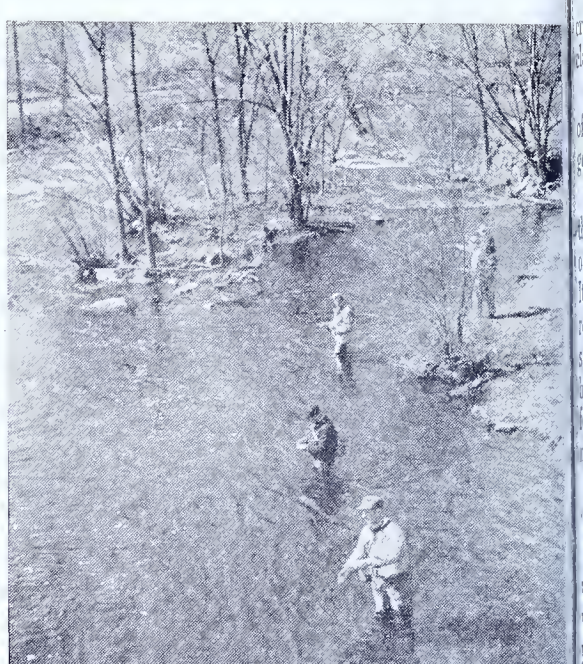
After driving several more miles we came to a narrow mountain road, one that had been built by Civilian Conservation Corps boys not too long before. Up and up we went, at places driving several hundred yards over a roadway scarcely wide enough for one car. I'll confess I was nervous over the prospect of meeting a car traveling in the opposite direction, for it would have been a case of either he or I backing our cars quite a distance to a place where there would be passing space.

Naturally, I didn't know how it was ahead, but I shuddered at the thought of backing down the mountain we were ascending. At many places there was an almost perpendicular drop off the right edge of the mountain road . . . and not a safety railing along the entire length of the roadway! A slight turn of the steering wheel, I thought, and we'd go plunging down the mountainside.

Fortunately, we didn't meet another automobile and eventually came to the mountain top. There we stopped and let our eyes follow the narrow, twisting C.C.C. road extending down the south slope of the mountain.



Sure enough! . . . There was a stream in the narrow valley.



There were entirely too many anglers on the well known streams.

We hadn't passed a human habitation, even a hunting camp, on the entire north slope of the mountain, and we could see no signs of such a place in the expanse of wilderness stretching before us.

"I'll wager there's a stream in that narrow valley," declared Doc, motioning toward the foot of the mountain to the south.

"I'm certain you're right about that," I replied, "and I'll bet there have been few anglers crazy enough to drive this dangerous road to fish in it. But my brakes are good and if you are willing to risk it we'll go down."

Doc, always one to take a chance, was ready and willing to explore the isolated, wooded valley dividing our mountain and the one beyond. So down we went, in second gear virtually all of the way, for my brakes, good as they were, wouldn't have held us over much of that steep, rock-strewn mountain roadway.

It seemed an endless journey to the foot of the mountain, but we made it eventually, me all asweat under my khaki fishing jacket. And, sure enough, there was a stream! . . . A crystal-clear, tumbling mountain waterway that had all the earmarks of an excellent trout stream. And, best of all, there was very little evidence that anyone had been there before us. At least, we had the place to ourselves this particular morning.

A thrill of anticipation made my fingers tremble as I threaded a worm on my hook and dropped it into the stream at the edge of the road, laying down my rod while I lifted my creel from the floor of the car in front of the back seat. I was fastening the

creel strap around me when Doc exclaimed:

"Fellow, you'd better grab that rod of yours if you want to prevent it from going down that creek!"

I glanced at my rod and discovered the tip whipping up and down so vigorously the butt was lifted off the round. It took me but an instant to grasp the rod, and I instantly felt the tug of a struggling fish. In another instant a beautiful native brook trout, fully a foot in length, was flopping on the marshy ground at my feet.

"Fellow," I exulted, turning to Doc, "we've found a trout stream!"

Less than 75 feet down stream from where I had hooked my brook trout was a quiet stretch of water, a pool perhaps 15 feet long marking a break between two stretches of swift water. Doc had fastened his boots to his belt, slung his creel over his shoulder, and lifted his rod from the car while I was catching the first fish. He made his way carefully to the pool, approached its edge on his knees so as not to alarm any fish that might be in it, and dropped a minnow softly in the center of the pool.

And then I saw eight nice trout caught quicker than I'd ever seen fish landed before. The first three Doc caught on his original minnow bait. Then he attached another and livelier minnow to his hook and as fast as he dropped that bait into the pool he'd yank other beautiful trout out of that cold stream.

Realizing I'd have to get busy if I was to catch more trout before Doc caught his limit, I started upstream. Here the creek was narrow, its banks thick with underbrush which extended over virtually all of the water. So thick was the brush, it was difficult even to get my line in the water, and I wondered how I would land a trout if I hooked one.

It was evident from the start that trout in large numbers were lying in that stretch of shaded water, for one hit my minnow the instant I dropped it through the first break in the brush I came to. I missed four times as many fish as I caught fishing that brush-choked shoreline, but even at that I had caught my limit in about an hour.

I was amazed and puzzled when I caught brookies, brownies, and rainbows in that isolated stream, all of them fish that obviously had been in the stream for some time. I was confident none had been placed there recently although some might have been trout stocked the autumn before.

When I returned to the car I found Doc sitting contentedly on the running board, smoking a cigarette in a self-satisfied manner. He informed me he'd stopped fishing a half hour before, having had his limit of pleasure by that time. His fish, like those I had caught, were all nice. In fact, we didn't have a trout less than ten inches long, and a few were 15-inchers.

Since that satisfying experience, Doc and I have made many similar expeditions in search of isolated streams where fishermen aren't more numerous than fish. True we have burned a lot of gasoline and worn out considerable tire rubber, but the results have more than counter-balanced the wear and tear.

Only a month ago my pal, Doc, left us for that place where all good anglers eventually go, never to return. I think of him now exchanging fishing yarns with those disciples of the supreme Fisher of Men who did their angling so many centuries ago in the Sea of Galilee.



Doc looks over a pool created by a beaver dam.

OPERATION SHAD-FLY

(*From Page* 11)

female subimagos as soon as they left the surface. The activity of the pool was further heightened by a flock of cedar waxwings that pursued the hatching multitudes, gathering them in the manner of fly catchers. They seemed to capture a number of insects each time they fluttered over the pool and returned to the overhanging willows with their mouths mustached with Shad Fly tails.

Chet, Jack and I spent a large part of an afternoon and evening at this pool observing the hatch. Our experience was probably the highlight of the season. The hatch had been on for several days and the trout were content to gather the nymphs leisurely as they made their way to the surface. Not a fish was observed breaking the surface although we had fine sport with a nymph fished close to the stream bed. By mid-afternoon we had a brace of fine trout each and were content to spend the time in observation.

Incidentally the sky was overcast all day with now and then a drizzle of rain. During the late afternoon anglers came in force to prepare for the evening rise. One jovial gentleman took his station on the end of a midstream deflector, propping his fully rigged rod upright with stones and watched the anglers take up stations on the banks of their favorite pools. He professed ignorance of the show, explaining that his son, a college professor, had insisted that he witness the fun. He observed also that he was in agreement with Ed Zern and the philosophy of his popular book on fishing. The rise failed to materialize and finally he came over to our comfortable seat under the willow. The tenor of his conversation as he watched the inactive anglers that lined the stream like so many patient herons, was that he would be very much pleased to obtain a concession from the state and install parking meters. He was typical of the good fellows that are members of the fraternity of Anglers. It was natural that we enjoyed the fellowship of the hour and parted without knowing each other's names.

(*Continued*)

TROUT OF PENNSYLVANIA

(*From Page 3*)

the present time the moneys for the growing and protection of fish and the stocking of streams is derived from the sale of fishing licenses. Fishing licenses are a privilege tax because those who do not fish or do not choose to buy a license are making no financial contribution toward this work. In Pennsylvania today all matters pertaining to fish and fishing come under the jurisdiction of a State agency known as the Pennsylvania Board of Fish Commissioners, consisting of a Commissioner of Fisheries and seven other citizens known as Board members, which supervises the operations of the Fish Commission.

The term "fish hatchery" under present-day conditions is not what the name implies. In their early days they were just what the name means—fish hatcheries, because at that time the eggs were hatched at these plants and the baby fish stocked in the streams when they were but a few hours old. Present-day conditions are such that the stocking of small fish will no longer suffice and the trout are held and grown at the State Fish Hatcheries until they are of a legal size or larger and then stocked in the public fishing waters. The growing of a vast number of fish to a large size has brought about the development of the so-called fish hatcheries into huge fish farms. The crops of fish are handled and grown somewhat as livestock on the farm except that the Board of Fish Commissioners grow their crop of livestock in the water, which might be termed "aquaculture" or water farming.

A trout hatchery consists of a hatchery building where the trout eggs are hatched and the baby fish cared for during the first few weeks of their life. In addition to this, the property consists of a large number of ponds or pools used in holding the brood fish and the growing fish of different sizes and ages. You will recall that previously we mentioned that trout must have cold water that is not contaminated with any matter injurious to fish, which follows that water supply for the trout hatcheries is generally large natural springs that flow an abundance of clean water of a low, even temperature.

Naturally, any livestock breeder must give very careful attention to the brood stock or the animals that produce the young. At the state trout hatcheries great care is exercised in selecting the parent fish. They are chosen for their conformation, color, rate of growth, disease-resistance ability, and gaminess. These selected brood fish are held in large ponds year after year with the sole purpose of producing the all-important egg supplies. These brood fish consists of the brook trout, the brown trout, and the rainbow trout; the lake trout is not grown in the Pennsylvania hatcheries.

You will recall that it was stated before that all three kinds of trout at the Pennsylvania hatcheries spawn in the fall of the year. In early October or at the approach of the spawning period, the male and female fish are separated. This is done to prevent fighting among the male fish when the female fish are present at this time. Remember that the fertilization of all fish found in the native waters of Pennsylvania is external.

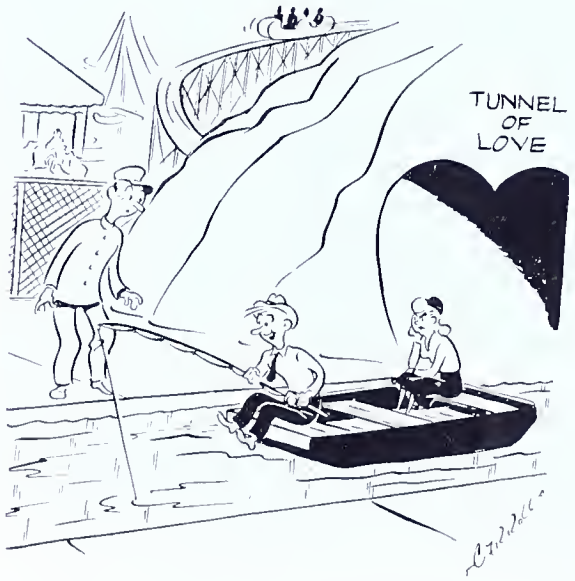
Not all female trout become ready to produce their eggs at the same time. Therefore, about every three days during the spawning period, the hatchery attendants examine them to find out if they are ready to give forth their eggs. This is told by a sense of touch. If the abdominal walls of the female are soft and pliable, it is an indication that she is ready to spawn. A female that is ready to spawn is called a "ripe" fish. During the examination, all ripe fish, together with a number of male fish, are placed in large tanks of running water. When this sorting operation is completed, the eggs are squeezed artificially from the fish.

The female fish is grasped by the spawn-taker and a gentle pressure is exerted on the abdominal surface from the head toward the tail. This gentle pressure extrudes the eggs from the fish which are collected in a two-quart pudding pan. Immediately following this, a male fish is grasped in a similar manner and the milt or sperm is scattered over the freshly taken eggs. Thus fertilization takes place.

After the pan is full of eggs, they are gently transferred to the hatchery building and suspended on specially constructed wire trays in troughs of running water. The number of eggs that a female trout gives forth depends chiefly on her age and size, which might be anywhere from 400 to 4000 eggs. The brook trout under normal conditions reaches sexual maturity at 22 months of age; the brown and rainbow trout take about one year longer, generally at the age of 34 months.

The artificial taking of the eggs, if properly done, does not injure either parent fish in any way. The size of the egg varies somewhat in proportion to the size of the mother fish, but as a whole, trout eggs are somewhat larger than a BB shot.

The care of the egg during its hatching period consists of daily removal of dead or infertile eggs. These eggs when life no longer exists in them turn a pearl white. At intervals throughout the hatching period, the eggs



are turned and their position is changed. This is done with the thought that the frequent change of position of the eggs produces a more vigorous fish. The hatching period of a trout again depends on the temperature of the water, ranging from 50 to 80 days. A trout egg is semi-transparent and as the eggs develop, the outline of the baby fish can plainly be seen within the shell. At the near approach of the hatching period, the entire fish can be observed moving within the covering of the egg.

When hatching time arrives, the little organisms break through the shell and fall through the specially constructed holding tray to the bottom of the hatching trough. The daily hatch is collected, carefully measured to get the percentage of hatch, and transferred to an adjoining trough of running spring water.

When the baby trout are first hatched they take no food through the mouth. They have attached to the lower portion of their body an umbilical or yoke sac. At this early stage the baby fish is very helpless and spends most of his time lying on his side or the bottom of the trough. As the umbilical sac is gradually absorbed, the little fish gains in strength and begins to swim in search of food. The contents of the umbilical sac will fiurnish the nourishment for the baby fish from 15 to 30 days, depending again upon the temperature of the water. The colder the water, the longer it will take to absorb the food.

As soon as the yoke sac is entirely absorbed, the fish food for the baby trout consists of finely crushed liver. As they grow and develop, their liver diet is supplemented by about one-third ground marine fish.

The trout fry or baby fish are kept in the building in troughs of running water until they are taught to feed and until the weather warms up sufficiently in the spring to put them out-of-doors in larger nursery ponds. The care of the little fish while in the buildings consists of feeding and the exercise of careful sanitary measures to prevent the outbreak of disease. In other words the sides and bottoms of the troughs are frequently scrubbed, and each day all uneaten particles of food and dead fish are removed. As a matter of fact, it is important that good sanitary practices be used in the management of the entire fish hatchery. The trout-grower has almost as many diseases with which to contend as the poultryman, and animals that live in the water are not as responsive to medical treatment as are higher forms of animal life; which follows that good sanitary measures are the best preventatives of disease outbreaks.

After the little fish are placed out-of-doors in the ponds to grow, it is found that certain individuals are much more aggressive and feed more readily than do others, which follows that in a short time in each pond there will be a number of different sizes of fish. Trout are cannibalistic and the larger ones do not hesitate to feed upon the smaller ones. In order to prevent this loss, the trout are handled and sorted into about three different sizes each year. Each time the fish are removed from the ponds for the sorting process, the area is thoroughly cleaned and sterilized before a new crop of fish is placed in that pond.

Trout during the first year at the hatchery are fed three times a day; the older trout are fed once a day. The larger trout are given one-third liver and two-thirds marine fish. Trout are not unlike people for they must have a certain amount of different kinds of vitamins. Liver is essential as it appears to contain most of the food substances that the fish require. The selected brood stock get more choice food as they are fed about one-half liver and one-half marine fish. They apparently need the extra vitamins to produce a crop of fertile eggs.

These trout are held at the hatcheries until they are from seven to fourteen inches in length. You will recall that we mentioned elsewhere that trout vary in their rate of growth. Some individuals at a hatchery under favorable conditions will be eight to nine inches in twelve months; this is unusual. The average rate of growth is about seven inches in this same time. Therefore, it is necessary to hold many of the fish at the hatcheries eighteen months to two years before they are planted in the public fishing waters.

Because of the present poor condition of the streams for the holding of fish over winter, the majority of the trout are stocked in the spring of the year or just prior to the opening of the trout season. During the stocking period, the trout are removed from the ponds, counted, weighed, and left in the holding tanks for twenty-four hours in the hatcheries without food before they start on their journey to the streams. It may seem odd to think that a fish would get seasick but a trout starting on its journey to the streams in the huge tank trucks, if his stomach is full, becomes nauseated and contaminates the water. This contamination is injurious to all of the fish, and oftentimes results in a serious loss.

The fish are transported by motor truck in specially constructed transportation tanks. These tanks contain ice chambers which keep the temperature of the water uniform and low and they are also provided with pumps which keep the water in circulation, providing the necessary oxygen for their journey.

During the calendar year of 1947 the Pennsylvania Board of Fish Commissioners stocked from their different trout hatcheries 2,075,522 large trout, weighing over 305 tons. In order to produce this large tonnage of fish, it required 4,095,000 pounds of fish food.

Lure to the Trout

Is there a man who never dreams
  Of rainbows darting in the streams,
Nor knows what thrill such pleasure means:
  Of joyful days spent in the sun
Along some tinkling brook or run,
  Where just to be alive is fun.
Could you who know these secret things
  Entice him to the riffling springs,
Where brookies fight and braked real sings.
  To him the music of the rill
The rocks and trees, the mirrowed hill,
  Will give him more than creel to fill.
The open sky, the leaping trout,
  Will call his better nature out,
To make the angler more devout.
  No wordly cares will fill his head,
While casting fly o'er flowing bed,
  The trout will lure him instead.

G. Earle Thompson

STREAM-SIDE LIFE

THE SPOTTED NEWT

By ROBERT LEO SMITH

You would hardly expect the red eft of the moist woodland and the common newt of the ponds and streams to be one and the same species. Yet they are exactly that, for the red eft is one stage in the life of *Triturus viridescens*, the spotted newt.

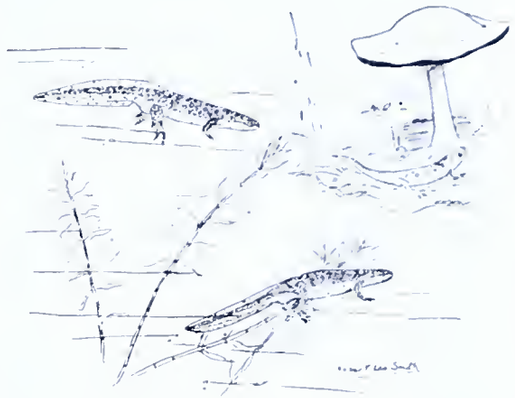
Rough-skinned, colored red-orange above, yellow-orange below and marked with black-bordered crimson spots, the eft makes its first appearance on land in the fall when it transforms from the larval stage and seeks the protection of the cool woods. The time the eft remains on land varies considerably both with the locality and the individual. A few may become sexually mature and return to the water at the end of their second year on land, and others may not return until the third year. During the time the eft spends on land, it grows larger and gradually loses its brilliant red color to varying shades of yellow, green or brown.

During either the fall or the spring, those efts nearly sexually mature migrate out of the woods. Across old roads and rubble they plod until they reach water. Here, or during their journey to the pools, they gradually acquire the familiar characteristics of the adult; the keeled tail, the smooth skin, greenish above, yellowish below, with flecks of black scattered over the body and a row of black-bordered crimson spots on each side of the trunk.

The spotted newt begins its mating activities in the fall and continues them sporadically throughout the winter. The male develops horny growths on the inside of the thighs and on the soles of the feet, noses and clasps the female and even deposits spermataphores—small vase-like, gelatinous masses surmounted by a spherical cap containing spermatazoa. But, at least as far as is known, the female lays no eggs at this time.

In spring the actual mating activities and egg-laying begins. The male acquires the horny excrescences to a high degree, a broad tail keel and brighter colors. And he pursues the females and performs vigorous, and often violent, mating antics. At first the male clasps the female directly behind her forelegs with his hind legs, his body bent in an S-shaped position. The pair may remain quietly this way for several hours. Then suddenly the male begins to yank and shake the female violently for nearly ten minutes. At the end of this performance, the male leaves the female and deposits the white spermataphores. As he moves away, the female follows, crawls over the spermataphores, picks them up and stores them in the cloaca until she lays the eggs.

The female begins to lay eggs in mid-April and continues through May, until she has deposited two to three hundred. To lay the eggs, she grasps the support on which the eggs are to be deposited—either the leaves or stems of aquatic plants—draws



her thighs closely together and forces the eggs out one at a time. Since she deposits only a few eggs a day, the egg-laying process is a long drawn-out affair. The egg, including the surrounding gelatinous envelope, is scarcely one-eighth inch in diameter and is brown at the upper pole and greenish on the lower.

In twenty to thirty-five days, depending on the temperature of the water, the eggs hatch. The brownish-green larvae are about a quarter of an inch long, possess gills, the buds of their forelegs and balancers, which are small appendages in front of the gills that enable the larvae to prevent themselves from being washed away. In two or three months the larvae transform to the familiar red eft and forsake the water for the woods.

The newts inhabit pools, ponds, quiet stretches of streams and swamps, where you may see them swimming about, crawling on the bottom or floating leisurely with limbs outstretched. They are active throughout the year, but during the colder days of winter and spring they bury themselves in the bottom mud. If the area they inhabit should dry up during the summer they bury themselves and hibernate until the water returns. Common in moist woodlands, the eft forms are most conspicuous just after a warm rain when they come out from hiding under stones and logs. The efts feed on insects, spiders, worms and other small forms of woodland life. The aquatic newts prey on insects and their larvae, small crustaceans, worms and the eggs of other salamanders and frogs.

The reason a lot of people do not recognize opportunity when they see it is because it goes around wearing overalls and looking like hard work.

The sweet young thing attended school at Temperature Normal—got her education by degrees.

Kill Less—Catch More

SPIDERS FOR TROUT

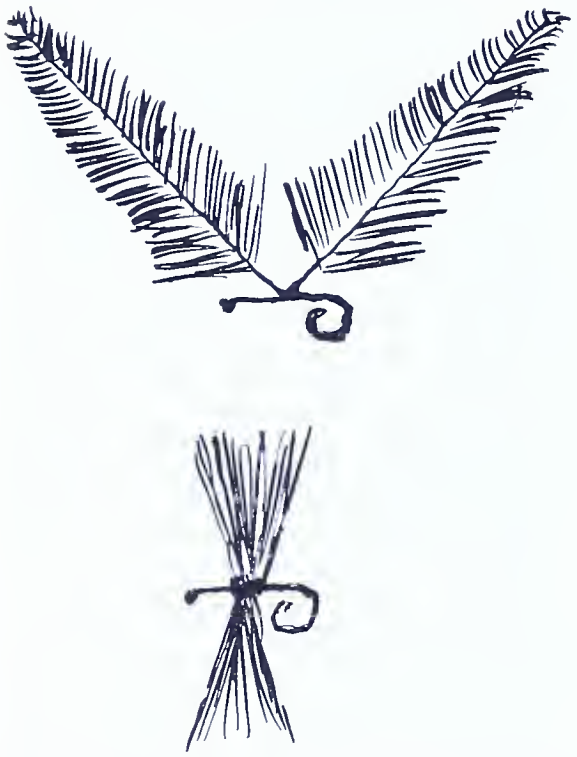
(*From Page 7*)

hackle which it bears makes it wind resistant. Often a spider which the angler thinks has been propelled perfectly toward a distant target stops in its flight and flutters lazily down to the water because it has lost its momentum.

Casting accurately is even more difficult because the best leader for spider fishing is a long and very fine one.

No angler needs to be told how to cast a spider if he intends simply to allow it to float quietly on the surface of the stream.

Giving it motion is a different matter. By *gentle* twitching of the rod tip—and that word gentle is purposely italicized—the spider can be made to dance and skip on the water. Or by a rapid stripping in of line it can be made to skate across the surface. The angler will do well to learn how to impart some sort of motion to the spider, for often that is when it is the most effective.



These two sketches show how simple the construction of a spider is. At the top, two long hackles have been anchored to the shank of a No. 16 hook. At the bottom, the finished fly after the simple operation of wrapping the hackles in place.

Incidentally, herein lies the necessity for using hackles of the finest quality. Soft hackles will quickly become water-logged, and the fly will become useless in a few casts.

Don't worry about how the spider lands on the water. Sometimes it will fall flat, with its hackles spread out over the water surface and its hook beneath the surface. Sometimes the leader will brace it enough to make it stand erect on its hackles. It may even alight upside down. Apparently that doesn't make any difference to the fish.

Finally, where should the spider be fished?

One answer to that question is: Anywhere trout are likely to be.

But that is not the answer that really brings out the advantages of fishing for trout with the spider.

A heavy, fast-moving riffle is a good spot for the spider. It will ride high and dry on the broken surface of the water.

A pool that is quiet and glassy flat also is just made for spider angling, particularly for the angler who likes to make his lure appear to come to life as soon as it alights.

For thrills, spider angling on a glassy pool is tops. The angler never knows when a fish will explode the water and smash his lure.

It often happens this way:

I had fished a long stretch of a trout stream and was tired and ready to quit, but a large, flat pool in the distance attracted my attention. I tied on a cream-colored spider, approached the pool carefully, and cast the spider up near its head.

To the eye the current in that pool simply did not exist, it was that lazy and slow.

But soon the floating spider began moving, at a tedious pace, back toward me. I became engrossed with watching it and unconsciously relaxed from my afternoon's fishing. My grip on the rod eased, and I tucked the handle under one arm and reached in my pocket for a cigarette.

Then it happened There was a tremendous swirl, and my spider disappeared. I struck—and knew even as my hands moved into action that I was too late.

That was really a good fish. The swirl it made on the surface of the water proved that. Further, it was no secret that this particular pool harbored some really fine brown trout.

But I couldn't prove the statement. The spider fooled me as well as the fish.

An easy way to carry cold drinking water in the car for a fishing trip is to fill a two-quart jar with ice and water, then wrap the jar in several thicknesses of newspaper. If the jar then is put some place where the sun does not reach it, the ice will last for hours, and the water will remain cold.

In river fishing for bass look for strikes around those patches of heavy rocks which occur in river beds and which provide excellent cover and feeding places.

Good river spots for bass include the tails of deep pools, deep holes close to banks, around large rocks and in shallow but fairly swift rapids and riffles.

SHORTAGE OF INSECTS MEANS TROUBLE

(*From Page 5*)

Men interested in fishing should not only shoulder this fight, but for health's sake every citizen of the Commonwealth should be on the alert to the advantages offered by clean streams. Of all the natural resources on this earth, the streams have been most mistreated by man.

It is not for myself that I write of these things, nor what I alone shall gain from it. But *our* future fishing is going to be completely ended unless we mend our foul practices! Certainly if you enjoy angling, or merely being out-of-doors along some stream as it sings merrily along its way, then it's your fight too!



Why not try imitations of the live insects. You will find they are just as effective and even more pleasing at the end of day. They require no care while they are among your tackle and the streams will not be dug up and our insects which are required by fish for food can become plentiful again.

Digging among the rocks and stream bottom for a few fish bait does more damage and outweighs any pleasure derived from their use. Why not use artificial lures, you will find them even more exciting. However, if you must "root" among the rocks for fish bait, pick a stream where game fish do not live. These fish are suffering terribly and are abused the most.

This is a warning. Heed it so another milestone can be made in the direction of better angling in Pennsylvania, or suffer with the poorest fishing you have ever had!

Snakes and fish have ears but these ears have no outside openings. They "hear" mostly through vibrations in the ground or water.

New cartoonist (getting his bearings): I believe I have your slant on all controversial policies except sex. What's your policy on sex?

Editor: We're for it.

THIS BUSINESS OF TROUT FISHING

(*From Page 9*)

of feathers, hair, tinsel, cotton and silk thread tied on various sized hooks in imitation close or otherwise of nature's insects. This department of the business is a specialty in itself and space will hardly permit of full discussion thereof. I shall, therefore, briefly list the analagous staples of "ham and", "beefsteak and onions", "bread and butter", "apple and mince pie" and coffee. With these comestibles I am sure, if your location is right and service (cast) good, you will always do some business.

The "ham and", the old reliable stand-by of this or any other restaurant will be light or dark "Cahills" size 10-12 wet and dry, 3 of each. "Beefsteak and onions" will be the "Gordon Quill" in the same sizes, both wet and dry. "Bread and butter" will be the two Coachmen, Royal and Plain, wet and dry, same sizes; "apple pie" will be the Hendrickson and mince pie the "pale evening Dun"; as for coffee, we'll have some black or brown and white "Bucktails". These should be tied on long shank No. 6 and 8 hooks. Thus you will fill your pantry—but where shall it be established? Naturally, it would be most profitable to locate in the vicinity of your customers homes—and that, of course, is in the water—a nice clear fast stream about 100 feet wide with depth varying from 2 feet on the gravel shoal to 10 feet in the deep pools.

However, a stream as it extends far up and down the valley may be likened to a city avenue transecting a great metropolis. The latter intersects with many roads, enters and leaves large and small squares and plazas, is submerged in the hurly-burly and rush of heavy traffic or peacefully wanders through quiet, parked residential districts; whereas, the river winds its way with a mild and musical gurgle through same pleasant meadow and then rushes tumultously roaring down a rockbound chasm to suddenly stop and loiter in some peacefully shaded quiet pool. This being so, the poor restauranteur must scratch his head and endeavor to pick one definite single spot on the city thoroughfare that is the most likely to be frequented by hungry people. Here, however, is where you in the trout business have a decided advantage, for your shop, being properly equipped, is quite mobile and readily movable. Nevertheless, as fish are just like human beings in that they prefer quiet and seclusion on occasions and at other times like to play and disport themselves in the noise and bright lights of Broadway, your wading equipment, matched rod, reel, line and leader, plus your stocked larder, will be of no avail if you fail to start business at the proper location. Therefore, your peripatetic restaurant must be able to set up shop at a corner stand where crowds are wont to gather.

Furthermore, people when dining out are not particularly attracted by the restaurant situated under the "L", as its constant and recurrent roar is not conducive to a peaceful meal; nor, for that matter, would they select a place to dine adjacent to a steam riveter operating at full blast, or an excavation job where the caterwauling of the drills alternating with the harsh blasts of steam shovels would constitute a symphonic accompaniment to their meals. Well, so it is with trout. You cannot hope to entice them to partake



of your fare, even if it is most daintily proffered, if you go thrashing about the stream, stumbling over boulders, waving your arms and wallowing about as you lose your balance; in other words, playing hippopotamus. No, you must proceed deliberately, carefully and quietly to within casting distance of the spot where you wish to serve up your dainty dish of "Cahills".

Although an attractive and likely spot to start business has been located, the city man on his busy main street corner can hardly expect customers on rainy, blustery days to patronize an open air garden, nor can you hope on such days to find fish in the middle of a hurrying, boiling stream. Under these conditions the most likely spots will be in the backwaters and eddies, close along the bank and under the alders close to the shore. Then again, in midspring, when the water is of medium height and the weather is fair to cloudy, the fish will be well established in the pools, but, as the season advances, they will be found during the early morning and evening to have moved up into the white water. So with these facts in mind, you must travel the stream and offer your wares at various places, chosen according to weather, water and time of day.

All these matters having been settled, the time has come to consider the preparation and presentation of your menu. Should you at the moment be located on the Bowery, it would be inadvisable to offer your patrons French pastry and marron glacé. I fear under these conditions you would attract few customers. So it is with the business of trout fishing. If the stream is high and possibly discolored, the fish are lying in secluded and protected spots and if you offer them small floating lures they will pass by unnoticed. At such times it is prudent to offer the customers a bill of fare of sunken flies in large sizes from Ham and Eggs (Cahills) down the line to Coffee (Bucktails). When Spring is well advanced and summer approaching, the diners commence to feel giddy and gay. They move about on the surface and work up into the fast water. In other words, they sup at the "Ritz", and here you must tender them "ritzy" food in the shape of small flies and floating lures. In this connection, it is well to remember you are just setting up shop and should not try to expand too rapidly, so you offer your diners only one course at a time, that is, whether fishing wet or dry, you only cast a single fly.

In summation, you must definitely never forget to use utmost care in approaching the water to be fished, and never permit yourself to indulge in careless or sloppy casting. Make each cast with dainty precision. Further, you should always be closely observing the stream and its life, constantly watching for any visible movement of fish, and perpetually maintaining an alert attitude.

One more word regarding this business of trout fishing and that is, the ultimate profit cannot and should not be measured by the size of the catch. The fish hog is never satisfied; the chap who always vies with his companions for high rod or largest fish is usually disgruntled, since naturally he cannot always be successful. It is true that a good creel brings a certain warm satisfaction to the lucky angler. Nevertheless, an interesting day on the stream amidst nature's vernal beauty, the symphony of the birds and the wind rustling through the trees, the gurgling laughing brook sparkling and dancing for pure joy in the benevolent sun as it flashes its way through and around the lazily drifting white puffs of clouds—all these things with a kindred spirt as a companon—one with whom the day's experiences, thrills and excitement can be genially discussed before the evening fire, before the bubbling kettle—these are the real profits to be had from the business of trout fishing.

What's New

Reviewed by Hugh Johnson

in Fishing Books

WHEN A WOMAN WRITES A BOOK about fishing, it's news, and when a woman writes a *good* one that *men* enjoy reading, it is front page stuff. *Till Fish Us Do Part* by Beatrice Cook (William Morrow & Co., 425 Fourth Ave., New York 16, N. Y., $3.00), published in March, is a witty, warm and gusty confession of a fisherman's wife, and strictly top-notch. The Cooks live in the state of Washington and fish in its fresh and coastal waters, but that doesn't detract one wit from its appeal for Pennsylvania readers. In fact, the grandeur of the Northwest, and the breath-taking beauty of the San Juan island area, as described by Beatrice Cook, will stir the heart of any reader anywhere. Beatrice Cook, a non-fisherman when she married Bill, got a mess of fishing gear from her bridegroom for a wedding present, and found herself playing second fiddle to a salmon and to a herring-soaked character named Cappy Bell, on her own honeymoon! Tough to take at first, she learned to love it, and *Till Fish Us Do Part* proceeds to tell, in rich rib-tickling humor, how she became as good a fisherman as Bill (and better at times) and also raised a family of boys just as crazy about fishing as their parents. The book fairly bristles with some of the most dramatic and most expertly described fish-catching adventures that I have ever read; and Cappy Bell—disreputable old tippler and herring-bait fisherman that he is, is an unforgettable character. In spots Beatrice Cook's humor is as high-wide-and-handsome as Betty (*The Egg and I*) MacDonald's; in some places, particularly in the honeymoon chapters, I thought of that angling gem—*A Wedding Gift* by John Taintor Foote; and most of all I enjoyed this book for what it is—a refreshing, heart-warming saga of family and fishing adventure. I don't know of a better book for a fisherman to give his wife or vice versa—a book that both will fight about but only over whose turn it is to read it next!

A PANORAMIC VIEW of the whole sport of fishing is offered in a book just published—covering all the various means employed by sportsmen, on all types of water, to lure fish to creel or gaff. *Here's How in Fishing* written and illustrated by Morie Morrison (Doubleday, 14 W. 49th St., New York 20, N. Y., $2.95) is essentially (a) an illustrated guide for beginners, or (b) an informational primer for the trout fisherman who wants to learn the fundamentals of surf casting (or a boat fisherman who wants to know how to conduct himself in a pair of waders on a bass river, or a fly fisherman who is curious to learn the facts about spinning, etc.). There are 128 pages of cartoon-like line drawings, with simple explanatory text, covering the entire field of sport fishing. It is sketchy coverage, of course, spread necessarily thin over scores of topics, but it's interesting and rather humorous reading for anybody who has at least a cousinly attitude toward the many kinds of fishing outside of the type in which he himself specializes. I should think that perhaps the primary usefulness of *Here's How in Fishing* might be as an angling "first reader" for a man to give his son in order to arouse in him an interest in fishing of some kind, because a youngster reading it will chuckle while he learns, and happily realize that fishing isn't as complicated or half as difficult as the "old man" sometimes tries to make it!

Animal fat should never be an ingredient in a fly dressing mixture though, applied to a line already dressed, it will float a line much longer and better in rough water.

Test the line-to-leader and leader-to-lure knots frequently when using a nylon leader with a casting rod. Not only does any knot weaken a line or leader, but they wear when passing through the rod ferrules.

To protect your reel after using it in salt water, wash it thoroughly in fresh water and then oil it. If this practice is followed after each outing you won't be worried with corrosion.

Freshwater Sponges

By Carsten Ahrens

Man has long been familiar with the sponges. If you have ever lived along the ocean, you are acquainted with the tiny but multicolored grantia sponge that adds so much variety to the coast line. After a storm the fantastic Venus' flower basket is often found upon the beach. The harvesting of the common bath sponge off the Florida coast has grown into an important industry.

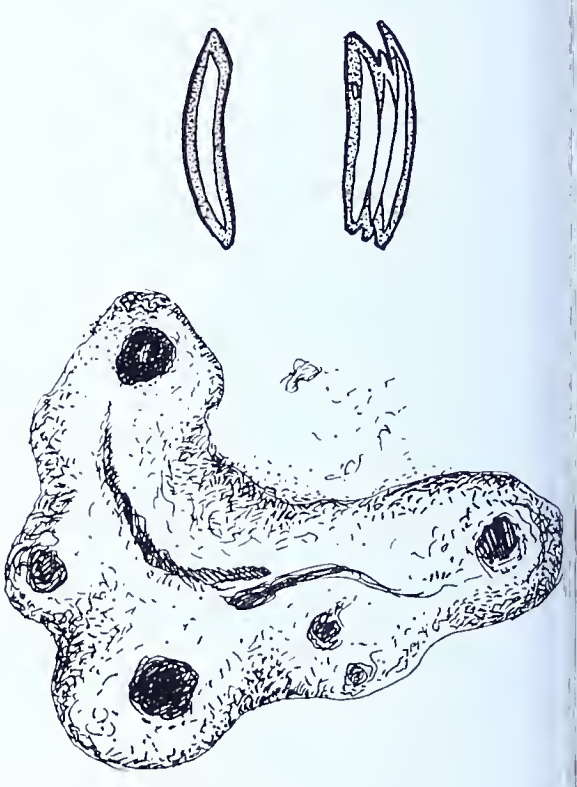
Since the sponges have holdfasts that anchor them to a solid object, they were long thought to be plants. Many of them become covered with algae, and this added to the belief that they were green plants. Actually they are animals; in fact, a sponge is an association of minute animals that are so closely integrated that the entire colony functions as a single organism.

The majority of sponges, including the bath sponges, live in the ocean. However, in the fresh waters of Pennsylvania, we have a small genus, Spongilla, that is not uncommon. It never grows anywhere near the size of its marine relatives. The colonies anchor themselves to submerged timbers or stones. Here they form irregular-shaped masses a few inches across and as much as an inch thick.

I have found sponges growing in a great many different habitats. They will be found in moving and standing water. They will not grow where the current is too swift, too cold (under 50° F.), too warm (over 90° F.), or in water that is muddy with fine sediment. This last factor kills many sponges because each colony is a maze of tiny canals through which water is "whipped" by microscopic projections. An abundance of sediment would clog up the canals and starve the colony. However they are often found in water that is polluted with mill waste or sewage.

When you use a dry bath sponge, you know its rigidity disappears as soon as you place it into water. The framework of the freshwater sponge remains stiff in the water, and this is another way that it differs sharply from its marine relatives. The skeleton is composed of brittle silica spicules, and their characteristic shapes determine the species.

Sponges reproduce by permitting the sex cells to escape into the water about them. When chance brings an egg and a sperm cell together, the new organism is at first free



Above—Enlarged Spicules.
Below—Sponge Colony.

swimming, but soon anchors itself and becomes sessile. Marine sponges also commonly reproduce sexually by budding. When this occurs, a new individual buds from the side of the old or parent sponge. Probably the freshwater sponges also reproduce in this way.

The freshwater sponges grow only during the warm seasons of the year. If they grow in the sun, they are apt to be greenish because of the presence of the algae that cling to them. In shady or dark habitats, they are greyish or tinted with yellow or brown. If they were plants, they would be called annuals, for the colony seems to fall apart and disintegrates at the end of the summer. Here again the freshwater sponge differs from the marine sponges for they may live in the ocean for years.

Before the old colony dissolves, a number of winter buds, no larger than pin heads, are formed, and these have the ability to live through the winter and start a new growth in the spring.

Pennsylvania Fish Law Violations

Cases Settled During the Month of March 1949

dams County
ittenturf, Huber, 39 Baltimore St., Gettysburg, Pa. Illegal devices ... $ 20.00
tevens, J. W., 317 York St., Gettysburg, Pa. Illegal devices 20.00

rmstrong County
enmuir, Abe., Freeport, Pa. Unnaturalized foreign born resident fishing 20.00

edford County
yan, James A., R. F. D. No. 3, Bedford, Pa. One trout in closed season 10.00

erks County
enrich, Wm., Jr., 247 S. 3rd St., Hamburg, Pa. Three illegal brook trout 30.00

radford County
elley, Lawrence, R. D. No. 4, Towanda, Pa. Fishing without license 25.00

ucks County
artin, Don, Green Lane, Bristol, Pa. Fishing without a license 25.00

ameron County
ndrews, G. C., Emporium, Pa. Nine trout in closed season 90.00
rice, Richard J., Cameron, Pa. One trout in closed season 10.00

hester County
lark, Hayes, Uchland, Pa. Two illegal trout 20.00
hite, Delton, 11 N. Matlock St., West Chester, Pa. Eleven trout in closed season 110.00

larion County
dams, Harry E., East Brady, Pa. Operating motor boat without license 5.00

learfield County
iola, Marie, Penfield, Pa. One trout in closed season 10.00

linton County
ussell, Marvin E., 109½ Irvine St., Lock Haven, Pa. Three trout in closed season 30.00
olbert, Ralph E., 16 Henderson St., Lock Haven, Pa. Illegal trout 10.00

olumbia County
askin, Mahala, Catawissa, Pa. Fishing without a license 25.00
One trout in closed season 10.00
askin, Richard F., Catawissa, Pa. Fishing without a license 25.00
One trout in closed season 10.00

umberland County
owler, Mylton, New Cumberland, Pa. Fishing without a license 25.00
owler, Myrtice, New Cumberland, Pa. Fishing without a license 25.00
hoap, Orville, Newburg, Pa. Two illegal brook trout 20.00
Five trout in closed season 50.00

auphin County
alter, Milton, 857 Main St., Bressler. Fishing without a license 25.00

rie County
omarnitzky, Alex A., 758 East 11th St., Erie, Pa. Fishing without license 25.00
Komarnitzky, John N., 758 East 11th St., Erie, Pa. Fishing without license 25.00

Franklin County
Haverstock, Clarence Wm., 821 S. Main St., Chambersburg, Pa. One trout in closed season 10.00
Kriner, Leo, 117 N. Potomac St., Waynesboro, Pa. One trout in closed season 10.00
McCleary, James Q., R. D. No. 6, Chambersburg, Pa. Possessing a net more than 4 ft. square or 4 ft. in diameter 100.00

Huntingdon County
Fleck, Forrest, 38 E. Shirley St., Mt. Union, Pa. Fishing without license 25.00
Bartlebagh, Kenneth L., Alexandria, Pa. Fishing without license 25.00
McClain, Monte, 1610 Washington St., Huntingdon, Pa. Fishing without license 25.00
Webb, Blaine W., 601 W. Walnut St., Lewistown, Pa. Fishing without license 25.00

Indiana County
Clawson, Lavern A., Indiana, Pa. Fishing without license 25.00
Fulmer, Clair, Indiana, Pa. Fishing without license 25.00
Richardson, Elmer H., Box No. 2, North Point, Pa. One trout in closed season 10.00

Jefferson County
Kovalchick, Pete, R. D. 3, Reynoldsville, Pa. Four trout in closed season 40.00

Lancaster County
Yost, Clarence, R. D. 1, Conestoga, Pa. One trout in closed season .. 10.00

Luzerne County
Michalec, Mike, 35 Webster St., Pittston, Pa. One black bass in closed season 10.00

Lycoming County
Dewald, Edward J., R. D. No. 2, Montgomery, Pa. Fishing without a license 25.00
Using illegal device (Snatch-hooking suckers) 20.00
Dewald, Lehman, Charles, R. D. No. 2, Montgomery, Pa. Fishing without license 25.00
Using illegal device (Snatch-hooking suckers) 20.00
Gruver, Robert, R. D. No. 1, Allenwood, Pa. One trout in closed season 10.00

Northampton County
Cerva, Steve, 724 Hayes St., Bethlehem, Pa. Fishing without license 25.00
Game fish in possession out of season 10.00
McGee, James, Jr., 745 Lawfer Ave., Bethlehem, Pa. Fishing without license 25.00

Perry County
Bender, Charles, Ickesburg, Pa. Fishing without license 25.00

Potter County
Fowler, Bernard, R. D. No. 1, Austin, Pa. Fishing without license 25.00

Susquehanna County
Baileys, Robert O., Uniondale, Pa. Fishing without license 25.00
Casey, T. J., Great Bend, Pa. Fishing without license 25.00
Raub, Earl, Great Bend, Pa. Operating a motor boat without license .. 5.00

Warren County
Seely, Burton R., R. D. No. 2, Titusville, Pa. Two brown trout in closed season 20.00

Westmoreland County
Berry, James M., Box 278, Avonmore, Pa. Twenty-five trout over limit 250.00
Berry, Stanley E., Box 278, Avonmore, Pa. Twenty-five trout over limit 250.00

York County
Crone, Cleason, 39 Laurel St., York, Pa. Exceeding creel limits 10.00
Ketterman, Bruce J., R. D. 1, Manchester, Pa. Fishing without license 25.00
Lehr, Warren D., 1024 North Duke St., York, Pa. Exceeding creel limits 10.00
Villarose, John C., 43 Laurel St., York, Pa. Exceeding creel limits 10.00

Put Your Outboard in Top Shape For Spring

Conditioning an outboard motor for Spring and Summer use is an easy task, since there are only a few simple points of maintenance. Most motors will operate after winter storage with no more attention than fresh fuel in the tank, but to add years of easy-starting performance to the life of any outboard, it is best not to neglect a thorough routine Spring conditioning.

Flush out the fuel system and clean the carburetor. If any old oil or sediment has started a gum deposit, it may be removed with alcohol. Take out the old spark plugs, clean and adjust them, or buy new plugs of the make and model specified by the manufacturer. While they are out, any oil that was placed in the cylinders for winter storage can be removed by grounding the spark plug wires on any part of the motor and pulling the starter cord several times.

Start at the top of the motor and tighten all the bolts and studs that might work loose during the season, especially the flywheel nut, propellor nut, and fuel lines. The fly-wheel nut can be pulled tight by placing an open-end wrench on it and striking it sharply with a hammer. To tighten the propellor without snapping the shear pin, grasp it firmly with one hand and tighten the nut solidly with a wrench. Never use pliers on soft copper fuel line connections—case them fairly tight with a wrench.

Examine the propellor for dents and uneven places. If the nicks are not serious, file them smooth. If it is bent or damaged badly, either take it to a marine service station for restoration, or get a replacement part from your dealer.

The magneto should be checked now if there was any indication of trouble last season. This is a job for your dealer's repair shop, since he has equipment that will measure the output of the magneto. Breaker points can be cleaned, adjusted, or replaced at the same time.

"Dear Editor . . ."

Try This Sometime

Chester, Pa.

Dear Editor:

The enclosed picture is Ed. Dubinick of Prospect Park, Pa. The fish is a 20" brownie, weighing 4 lbs.

The following is a report on the fish: While fishing in Chester County, July 10th. Ed. along with Charles Lentz and his grandson, Charles Hobb, who is nine years old and a good trout fisherman having caught



Ed Dubinick and his nice Brownie.

his limit several times. Hooked this fish twice and lost it.

On the 24th of July while fishing the same pool Charles Lentz hooked the fish and also lost it along with 7½ foot leader. This happened about 10 a. m. Lentz left the stream about noon and Ed. decided to stay and fish for the big one later in the day and about 3 p. m. Ed. thinking he was snagged started to pull on his line and felt a fish tugging on it and after a battle of about 10 minutes landed it. The fish itself was not hooked, Ed. had hooked the loop in the line end of Lentz's leader and landed the fish.

Very truly yours
Charles Lentz

★ ★ ★

One from England

9 Parvis Court
The Rutts
Bush Heath
Heats, England

Dear Sirs:

I have just received my first copy of THE ANGLER, and I must say that I am very interested to see the efforts you are making on behalf of everything in your state. We have no end of trouble here in England from pollution, and over fishing, and efforts to control these evils are being made, but usually too late.

I have an undeserved reputation this side of being an "expert" on spinning and dry fly and if you would care for an article on these subjects from the English viewpoint, if you would let me know I should be glad to write you say a 2000 word article. I should not of course need any remuneration if it would interest your readers, I should be only too glad to help. Awaiting your reply with interest, I am

Yours sincerely,
E. W. BURTON.

Editor.—Mr Burton shall be invited to join us with an article—watch for it.

★ ★ ★

Lynn Calls a Turn

DuBois, Pa.

Dear Editor:

That article in the February issue by Donald Shiner is the real dope and should be a help in conservation of our finny population.

Wish every fish hog could read it. And behold some of those who call themselves sucker fishermen who fish for suckers in our best trout streams.

There ought to be a law.

Sincerely,
LYNN DAUGHERTY
701 S. Brady St.

Editor. A bill introduced in the legislature, now adjourned, will prohibit fishing in streams stocked with trout for one month prior to the April 15th opening of the trout season. This bill was signed by Governor Duff April 13 and is now a law.

Fishin'

I went fishin' one day, when I was a kid
With an old cane pole and a wiggly worm.
With grubby hands I baited the hook
And left an inch dangle to squirm.

I sat on the banks of a crooked creek
And dropped the line into the stream.
I settled myself for a nice long wait
And lay back upon the bank to dream.

The dream was short, for I felt a jerk
Of the old cane pole I held in my hand.
I played him a bit, then pulled him in;
He was just as easy as pie to land.

He wasn't pretty and he wasn't so big,
But I thought him a wonderful sight.
I took him home and showed him to Ma;
We had catfish for supper that night.

I went fishing again the other day
With an expensive rod and a pflueger reel
I drove one hundred miles to a lake
And launched the boat with a hearty zeal.

I cast and trolled and finally hooked
The grandpappy of all fish.
I played 'im, I swayed 'im, I reached fo
the net
And then, he dropped off the hook with
swish.

When I got home, we had no pike
On our table for dinner that day,
But I can brag for years and years
About the big one that got away.

—*Jess Alloway Heilma*

A fish that has been wounded and that i bleeding should be put in the creel, if i is of legal size. In nine cases out of ten bleeding fish soon is a dead fish, and if re turned to the water to die it is wasted.

Spinner and Worm Combination

By Don Shiner

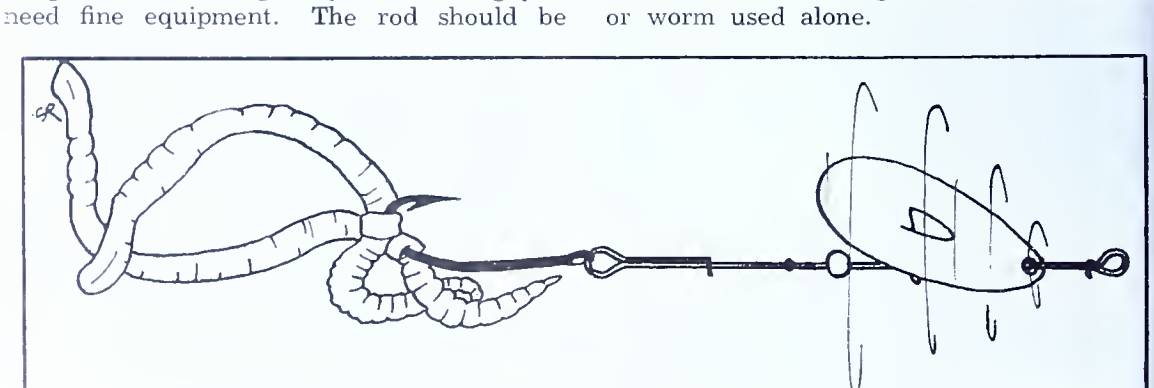
Worms are excellent as trailer baits on spinners. There is something about the flash of a revolving spinner blade and worm weaving rythmatically behind, that causes many sizeable fish to forget all caution and dart instantly after it.

The technique in using this combination is the same as when fishing any spoon or plug. Retrieve just fast enough to make the blade revolve. Some spinners require the retrieve to be fairly fast, others need only a slow pull. Often one type is successful when the other fails, thus, the angler should include both types in his tackle kit.

The worm and spinner is rather light in weight so to do a good job of casting you need fine equipment. The rod should be fairly light in action, the reel should ru extremely free, otherwise the worm will b torn from the hook during the cast. Th spinning reel is excellent for this spinne and bait combination.

Using a fly rod to cast this 'rig' is anothe good method. Or, if either method fails t produce expected results, try trolling. Thi is an excellent way of fishing as the bai and lure is in the water continuously compare this to casting, here nearly a thir of the time is spent selecting a likely spo and then making the cast.

Which ever method appeals to you, you ca feel assured that it will take fish. Ofte the whirl and sparkle of a revolving blad with a wiggling worm trailing behind lure more fish into striking than either a spinne or worm used alone.



PENNSYLVANIA'S

ANTI-POLLUTION PROGRESS

Talon Company Puts Waste Plant in Action

Completed at a cost in excess of $400,000 treatment plant for handling waste waters now in operation at the Meadville plant of alon, Inc., world's largest manufacturers of ide fasteners, which marks an important ep in advancement of the Clean Streams ·ogram of the Sanitary Water Board. The ctory is located along French Creek.

Incorporating new designs for treatment waste waters from the electro plating de-artment, the treatment works has a ca-acity of about 100,000 gallons daily. It is ooked upon as one of the most efficient nits yet designed for the treatment of that articular type of industrial wastes and at-·acts engineers from many parts of the ountry who are interested in similar pol-ıtion problems.

It was set up to treat two types of wastes—cid-bearing waste from the pickling and nishing jobs and cyanide-bearing waste from electroplating operations. Acid wastes are stored in any of six wooden tanks where they are treated with ferrous sulfate while the cyanide wastes are stored in two other tanks for chlorination treatment. The eight tanks have a combined capacity of 360,000 gallons.

Four other tanks are used for storing and refining sludge which is pumped from the settling tanks. It is hauled to a dumping ground after refinement.

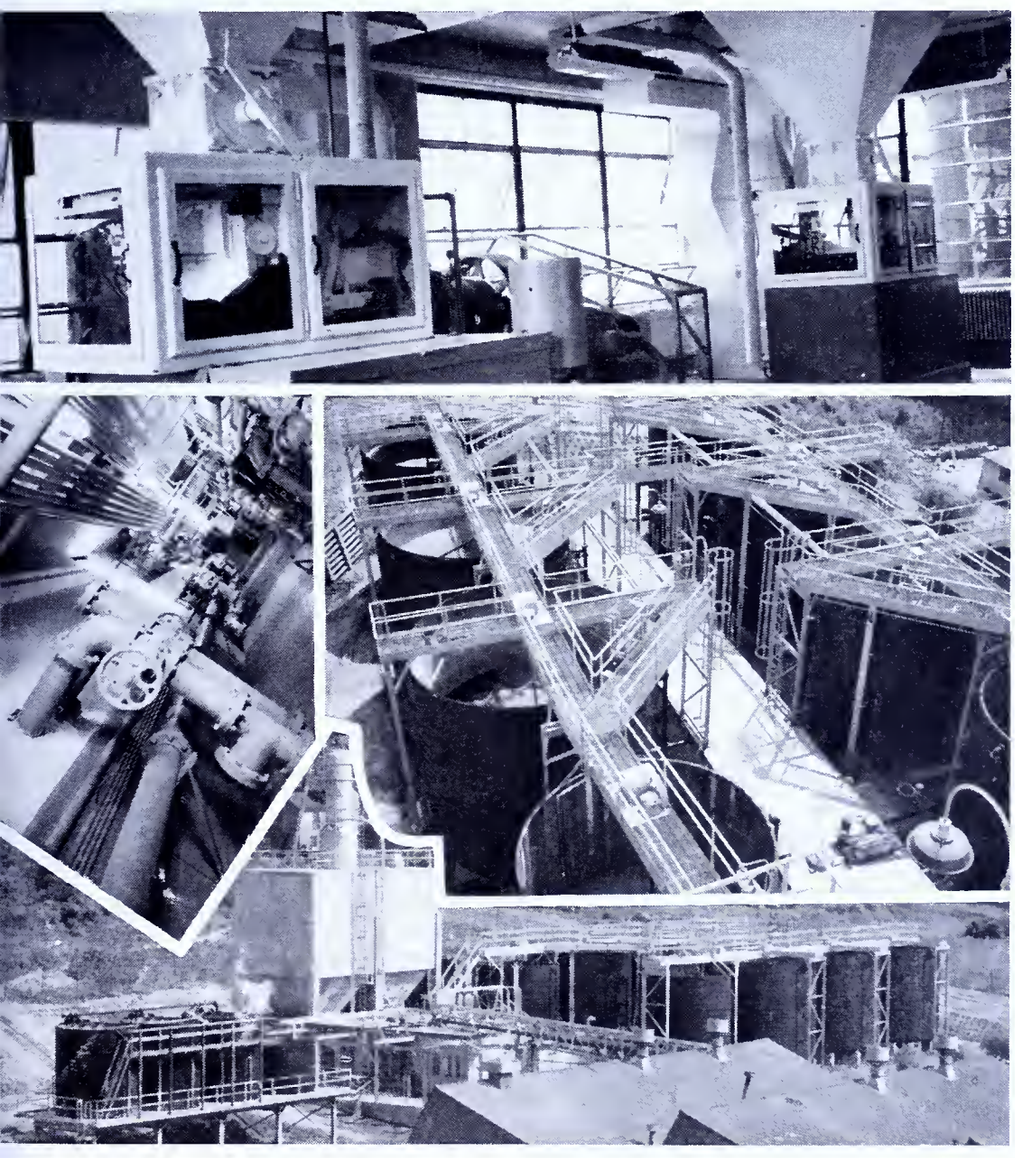
Wastes from the plant are gathered in underground accumulation tanks and then pumped to the settling vats where they are treated. The clear effluent resulting from about 36 hours of treatment is released into storm sewers and ultimately winds up in French Creek. The sludge settling to the bottom is pumped to the sludge tanks.

In an odd aspect of the disposal plant operations, Talon makes use of the byproduct of the wastes of one industry to treat the wastes which result from fashioning the component parts of zippers. Ferrous sulfate used to neutralize the acids is a byproduct of steel industry waste.

The plant includes a one-story concrete block building topped by two bins for storage of chemicals. The building houses a laboratory, chemical feeders which automatically measure the amount to be introduced into the waste matter, pumps, a pipe gallery and mechanical and electrical controls.

Each of the two bins atop the building holds 200,000 pounds of slaked lime and ferrous sulfate. Pneumatic lifts working on the same principal as an oversized vacuum sweeper can transfer a carload of chemical to the bins in eight or nine hours.

The new batch-type treatment works replaces a continuous-type treatment which was 98 per cent efficient but was difficult to control because of the variance of the waste products. In the new installations, variance is no problem as technicians can treat a batch of waste containing any percentage of harmful solutions. The technician merely takes a sample to determine the treatment then sets automatic pumps and feeders to measure out the chemical needed and pump it into the settling tanks.



Top-Chemical feeders for weighing and applying chemicals. Left center—Pipe gallery. Right center—Treatment tanks. Bottom—Exterior view of treatment plant.

Children's Camps Install Sewage Disposal Systems

Extensive systems of sewage disposal have been installed at both the boy's and girl's camps at Camp Windsor, Starlight, Wayne County, in the Pocono Mountains in furthering the Clean Streams program.

In each instance a 3,400 gallon septic tank has been installed. At the boy's camp the sewage is pumped to the tank from which the effluent is discharged to tile fields which total 2,000 feet in length.

At the girl's camp the sewage and kitchen wastes are pumped to the septic tank and the effluent is then pumped through 800 feet of force main to the crest of the hill where it discharges through three series of tile drains each of 1,700 feet length to absorption beds. Cost of the installation was about $19,000.

Ban Phenols Discharge To Streams

A standard requiring the complete elimination of the discharge of chemicals generally known as phenolic bodies into the Ohio River and its tributaries, has been adopted by the Sanitary Water Board in connection with the program to bring back Clean Streams in Pennsylvania. Phenolic bodies are designated as comprising "phenols, cresols, tar acids and similar taste and odor producing substances," and is a waste which comes from the production of coke from coal at steel mills and manufactured gas plants. This type of waste is also produced at petroleum refineries.

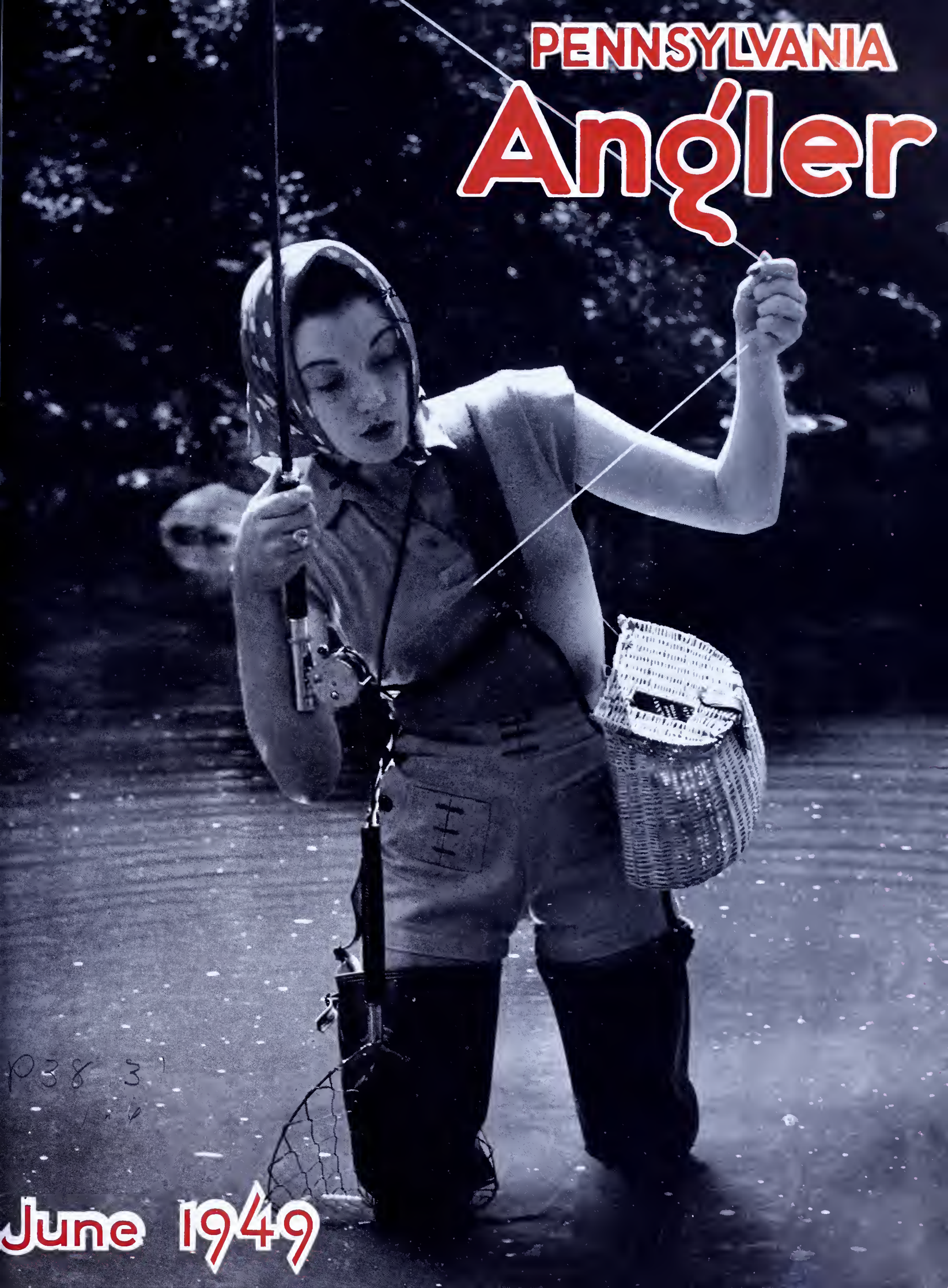
Obey the law...

The many fish bred and stocked by your state hatcheries plus fish naturally propagated can be multiplied many times over by observance of the fish laws, the law protects your sport, cooperate with your local fish warden and you will be helping yourself to better fishing.



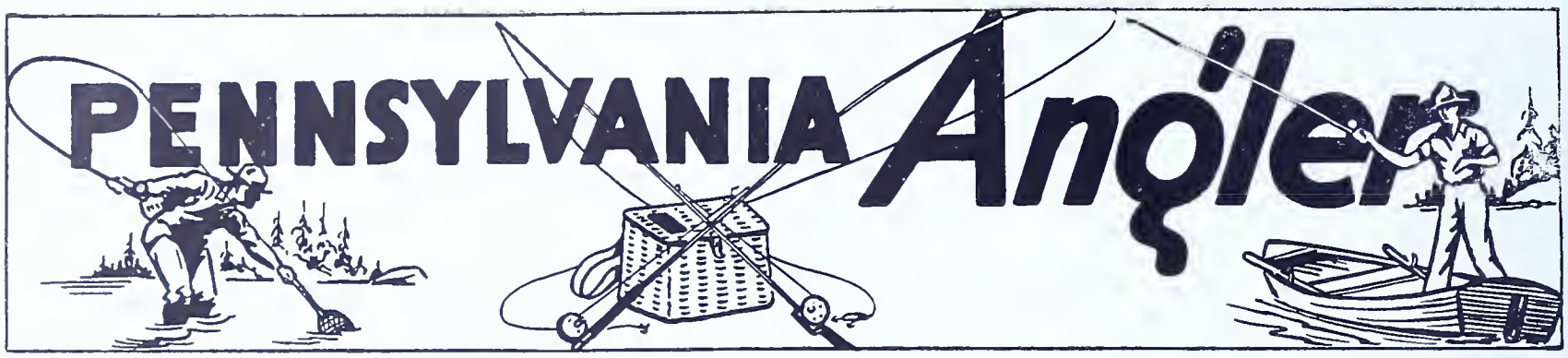
Be a Sportsman

...Have more fish



PENNSYLVANIA Angler

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HON. JAMES H. DUFF, Governor

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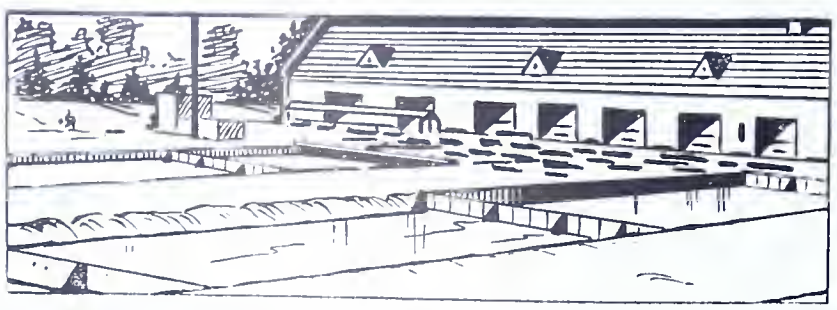
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COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA
FISH COMMISSION
HARRISBURG, PA.



The Angler

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The Cover . . .

for this month is our idea as to what more Pennsylvania streams should be stocked with in conjunction with the many thousands of fish already planted.

New Law Will Protect Trout

On Wednesday, April 13th, Governor James H. Duff signed into law Act number 65, which prohibits fishing of any kind in all waters of the Commonwealth, between the fourteenth (14th) day of March and five o'clock antimeridian (5:00 a.m.) on the fifteenth (15th) day of April in any year, except in rivers, ponds and lakes not stocked with trout by the Pennsylvania Fish Commission.

The Act, originally House Bill number 1192 was introduced by Representatives George Goodling of York and George Shoemaker of Schuylkill Counties.

The new law prohibits fishing in trout streams which are stocked by the state for a month prior to the opening of the legal season on trout.

The purpose is to protect the trout against the sucker fishermen and those who deliberately fish for trout while pretending to be sucker-fishing. Some of the best trout streams are also good sucker water. The sucker fisherman, using bait, catches a lot of trout and often they are injured in being taken from the hook. At times the temptation to keep a trout caught out of season is too great for the angler to resist.

The excuse of fishing for suckers is frequently used by fishermen who thus take a heavy toll of fine trout far in advance of the season. Caught on a trout stream, these fishermen need only to say that they are after suckers.

It is to prevent this practice that the stocked trout waters will be closed. The move will leave plenty of water open for the sucker fisherman, who usually pursues his brand of sport at the mouths of streams. The ban will hit the fisherman who goes to the best trout hole on a stream, throws out his baited hooks and often catches more trout than suckers. It is no injustice to anyone to prohibit this kind of fishing during the period when trout waters are full of newly stocked fish and the new law will meet with the approval of honest fishermen all over Pennsylvania.

* * *

Sport Spoilers

Some of the veteran fishermen are getting disgusted with the way some of the thoughtless fishermen are spoiling the pleasure of going along the streams.

Most anglers admit that a big part of the reason they enjoy fishing is because it gives them an opportunity to observe the beauties of nature. There are only so many miles of streams and most of the devotees have a few favorite spots. Until a few years ago they could go to these places assured they would not have that "man-visited" appearance.

Thoughtless fisherman are rapidly spoiling all of this. They are leaving trails of rubbish, damaging picturesque spots by hacking away trees and bushes and in general ruining conditions.

Far too many cases have been reported where the anglers were too lazy to walk any distance and so have driven their automobiles through fields and along attractive paths.

It is this same type of carelessness by hunters that resulted in the closing of many good hunting sections in the late Fall. Fishermen are beginning to worry that farmers who see their property damaged and littered will be closing their lands to all visitors.

The same story is true along highways near fishing streams. Trash piles are accumulating wherever there is room to park cars.

It is unfortunate that a comparatively few thoughtless persons can spoil the pleasure of so many, but that is what's happening. Whether the real sportsmen, through their organization, can do anything about it is a question. It certainly would be worth trying, though.

Williamsport Gazette & Bulletin

It's the Fishing That Counts

By N. R. Casillo

CATCHING fish, at least a few fish, is the primary objective of any fishing jaunt. If fun, some mild adventure and good companionship are thrown in for good measure, then, the experience becomes at once a highlight in the art of pleasurable living.

Not infrequently, as you have doubtlessly discovered, a well-planned trip to some distant point doesn't always pan out. Indeed, the dreariest as well as the most distasteful fishing trip that I've ever taken was one wherein we were eminently successful in catching fish. On the other hand, an impromptu outing to some local spot more often than not rings the bell.

Altogether too many anglers spurn fishing for our more common aquatic denizens especially if it envolves fishing for them in local waters. Yet, in retrospection such experiences often turn out to be the most enjoyable of one's piscatory peregrinations. But, human nature being what it is makes us peculiarly susceptible to the lure of distance and for the rosy hue which it is supposed to impart to members of the finny tribe. An acquaintance of mine who never fishes locally for bullheads or who would not even be seen consorting with any one that does, is said to greatly enjoy the sport while sojourning in the seclusion of some Canadian hinterland. Information also has it that a mess of them done to a turn appeals even more to his gustatory tastes. Man is a perverse critter. Let me elucidate.

Even when I was a lad Cold River had the reputation of being a topnotch trout stream. In fact, many of the older anglers related frequent and rather impressive yarns of the large trout that lived in some of its celebrated pools.

Of course, I was duly and properly impressed by all and sundry stories, and periodically resolved to some day fish the famous river. But to me the streams nearer home were just as alluring and had in addition, proved their worth. I was reasonably sure of a good mess of trout in White, Summit, Hurricane, and Stearns brooks, and they were far more accessible, being less than a fifth the distance away.

Then, when I arrived at the age that entitled me to the use of the family conveyance and thereby permitting me to go farther afield in quest of the elusive squaretails, I did it with a vengeance. Indeed, those time-tested brooks and even Cold River were promptly forgotten for the bigger and supposedly better names upstate. It was just another illustration of an old saying, something or other about distant pastures, or perhaps, more appropriately, a wandering fisherman gathers no moss.

Well, I did plenty of wandering and Cold River was relegated to that ancient past when I didn't mind wading an icy stream all day long in my bare feet.

However, Cold River had left indelible impressions on my youthful brain. Last year, after a lapse of some twenty years, it once again popped into my conscious mind. I must admit though, that the reports of the large rainbows with which it is now regularly stocked had something to do with it.

Early last May I wrote to my brother Guy (who still holds forth in the Cold River district), to prepare for a serious invasion of said river with the express purpose of capturing some of those reputedly he-trout. He readily assented and set the date for early June.

On the first day of an extended outing and reinforced by another fishing brother, namely Mike, we hit the stream just outside of the village of South Acworth. At last I was about to tangle with the famous denizens of Cold River.

From dawn till noon we whipped a considerable stretch. Upon congregating at a predetermined spot at the edge of a most promising pool deep in a cool ravine, we held a conference and came to the conclusion that the fish were too much for us.

"Let's go on over to Robb's Reservoir," suggested Mike as he tore into a limburger and onion sandwich.

"Now, you're talking," urged Guy.

I looked from one to the other. "Oh, ho," I admonished, "so you both turn out to be a couple of sissy fishermen."

"Whadda you mean, sissy fishermen?" roared Mike.

"That's about all you'll do there—sissy fish for horned pout and maybe a few yellow perch."

"At least we'll get us a mess of fish," hopefully retorted Guy.

Secretly, I was tickled with their decision. Robbs Reservoir is at all times a fascinating place, being an abandoned storage basin a couple of miles in length, its tortuous channel flanked by a wide expanse of forest-bordered marshland. Its waters literally teem with small but succulent horned pout and some yellow perch. The adjacent marshes are alive with frogs. I might well add that in that part of New Hampshire, "poutin'" is an ancient an honorable sport.

After demuring a little longer I "reluctantly" yielded. "Okay, if that' what you fellows want to do, then, let' get going." Mike gave me a sharp loo and for a second I thought he had de tected my elation.

I had not visited the reservoir sinc before the war and that last visit wa made after nightfall in a driving rai Mike had lured me there with an as sorted flock of stories. So, with the ai of a flashlight and a smoky lantern w succeeded in rowing and poling a ski through entanglements of stumps an



Fish are desirable adjuncts to a fishing tri But don't sacrifice fun and sportsmanship fo fish. These intent still fishermen without fis are Lawrence countians, Dr. Burr Rogers an Wm. Klee.

drowned trees to the approved fishin grounds.

On our way back we lost the flash light and became hopelessly confuse in the maze of winding leads that le nowhere. After floundering about for couple of hours we gave up in sheer exhaustion and spent a dismal night i that cold downpour. What a night!

When a most belligerent dawn finally broke, we found ourselves less than couple dozen feet from the boat moor ing and the comparatively luxurious comforts of a snug car, a thermos o hot coffee and some sandwiches.

So, on this latest occasion I wa rather anxious to see the place afte my prolonged absence, and under the vastly different weather conditions tha prevailed.

To my delight the reservoir and sur

oundings had scarcely changed. Even
ie dilapidated dock and a couple of
ie boats looked suspiciously familiar,
ie latter a bit more waterlogged, but
ill serviceable.

"I hope the fishing is as good as it
as the last time I was here," I ob-
erved as we piled our duffle into one
the newer boats.

"You'll not be disappointed," said
uy.

As we pushed on through the shal-
ws dodging those snags of yore we
ushed a variety of marsh birds. Bit-
rns, night herons, gallinules and a
ouple of great blue herons flapped
cross the numerous waterways or
urried through the tall grasses.

The quantity of frogs was astound-
ng. As our progress was slow enough
permit it, I joined my bait casting
d, tied a big red ibis to a short length
f line and succeeded in catching an
ven dozen of the delicious croakers
efore reaching the locale.

The choice of fishing spots on the
eservoir has always been a source of
onder to me, because my experiences
ave proved that the fishing is equally
ood anywhere on it. But such matters
re usually governed by past experi-
nces, i. e., if fish are caught at a cer-
ain place on some previous visit, then,
ie fishermen repeatedly return to it.
ccordingly, the spot selected had been
shed by my brothers, both collectively
nd individually, more than a score of
imes.

The time honored bait for horned
outs is night crawlers. Not that the
out has any qualms about accepting
nything even remotely edible, but be-
ause the crawlers are practically a
radition. Anyone using a piece of bull-
eck or stale meat or even choice
hicken entrails, is relegated to the
west strata in the pout fishing fra-
ernity.

We dropped our well upholstered
ooks overboard and faster than you
an say *pout* we had bites. It looked as
f the fish had had advance notices of
ur coming. Fact is they are the most
ospitable fish that I've ever known.

When a horned pout garners a gob
f juicy angle worms into his capacious
naw, he does so without any prelim-
nary gastronomic finesses. In other
vords, he goes to town. Therefore, un-
ess the angler is alert and begins haul-
ng in the line at the slightest suspicion
f a bite the hook will subsequently be
ound somewhere in the nether regions
f Mr. Pout's anatomy. What is more,
hey seem completely cheerful about it.

Almost in unison we lifted our rods
nd pulled three nice fish into the boat.
For the ensuing half hour amidst occa-
ional cries of anguish as the sharp
pines of the alleged victims found
heir marks, we landed an average of a
ish a minute.

The lull that followed that frenzied period was a welcome one, for it gave us a chance to eat supper and prepare for the night fishing. Already twilight had descended and the frog chorus was deafening. Back in the pines at the edge of the marsh a couple of barred owls loudly serenaded one another. In the more remote sections of the marsh could frequently be heard the soft quacks of waterfowl. When the unmistakable hoots of a great horned owl cut through the medley of other sounds, everything was stilled except the monotonous cries of the frogs.

Pout fishing really comes into its own after nightfall, the lukewarm sport of the daylight hours becoming one replete with suspense and mystery under the cover of darkness. It is then that the larger members of the clan do their feeding, and I have discovered that a pout around a pound in weight creates plenty of excitement when hooked at night on light trout tackle. Another item of no little importance is the difficulty entailed in removing the hooks from some of them, particularly when the operation is attempted by the fitful light of a kerosene lantern.

Then, there are times when something out-of-the-ordinary may happen. Something that will lend color to an otherwise uneventful evening, and forever impress the occasion on your memory.

Well, something happened that night that somewhat spiced up the program. It was around eleven o'clock and the fish had slowed up considerably. We could have moved to another spot with the assurance of more action, but we had already caught in the neighborhood of three-score fish and considered them ample for an old fashioned family fish fry we had planned for the next evening. So, we were content to sit there, pull in an occasional fish and listen to the nocturnal cries of the hunters and the hunted.

During an unusually long interval of inaction, Guy, who was sitting in the stern, suddenly straightened, grabbed his rod and cried out in surprise.

"What the deuce is that?" he asked in alarm.

I immediately threw the beam of my flashlight on his rod. That member was arched in a complete semi-circle with the tip actually submerged. Convulsive jerks endeavored to pull it even deeper. Guy hung on grimly.

"Give him line," I yelled. "You've got something!"

"I'll say I have," retorted Guy as he released the reel crank.

There followed a shrill screech and a sudden straightening of the rod as the creature made a run of perhaps twenty feet.

"Has he torn loose?" I anxiously asked.

"I think so," fearfully replied Guy as he gave the rod an investigative twitch. "Holy smokes—no!" he quickly added.

For the ensuing five or ten minutes excitement was rife. Unheeded directions were hurled at the demented angler as the fish or whatever it was fought deep and viciously.

"Aw," finally observed Mike as he lit a cigaret, "it's just a big snapper."

(*Turn to Page* 16)



Robb's Reservoir, scene of this story, and inspiration for subsequent fishing jaunts. The men intent on getting boat No. 7 are the writer's brothers.

Rotating Hardware

By Don Shiner



This new 'reversed' lure is deadly on trout.

THE rotating blade is the oldest, deadliest, most versatile, most popular lure used today. However, used haphazardly it is pegged for what it is—hardware. It can be tossed at the fish with a fly, bait or spinning rod and not forgetting the much used methods of trolling. Whether some old bruiser of a fish will laugh himself silly or bolt from his sulking place after the lure depends entirely on you. It can be made to imitate a spirited minnow, or one that is crippled, or again just plain hardware.

"Spoons" have often been mistermed "spinners," but for records sake let's make it clear that a spinner is a lure incorporating a blade mounted on a shaft causing it to spin or revolve when forced through water.

Many anglers dispute the common belief that the revolving blade imitates a minnow, you may be one who does not, but if you ever watched a willow leaf or slim eli shaped spinner dart through the water, you probably have remarked at some time the almost exact rendition it gives of a small fry.

Whether a ring eyed fly added so that it trails behinds, weaving rhythmatically, adds any more to its life like appearance, is the one part which can be debated upon. Probably the fish are oversupplied with curiosity and strike from a sudden impulse when first spying the revolving lure and fly. How else can the fact be explained that watches, coins, rings, beads, and even small nails have been found in the stomach of many game fish. This does show why a fly added to a spinner sometimes help, and why some shape spinners with certain finish makes the fish bolt unshamefully at the passing lure.

However, let us assume that a spinner does represent, to the closest degree of any other lure, a minnow. Just a bare spinner with a single, double or treble hook attached will catch as many fish as one that has an addition of a fly. If a fly is viewed by the fish as it is by the angler, there can be no question that it looks like a fly or insect. If this be the case, why not reverse the entire lure and place the fly or insect in front of the spinner so that it imitates a minnow chasing a fly or underwater insect instead of the exact opposite of a fly chasing a minnow as is the case of our lures now.

This logical chain of thought needled away at me some years ago until I sat down and devised a way in which this idea could be incorporated in a lure. I struck upon two methods and since have had surprisingly good luck when using them on game fish.

One method reversing the position of the fly and spinner is by taking a spinner with an elongated shank and tying a fly directly on the wire shank in front of the spinner blade. The



Reversing the fly and spinner's position gives a true picture of a minnow chasing an insect.

second method is by tying a fly directly on a short piece of wire, instead of a hook, and attaching the wire to the eye of the spinner. Either method is equally efficient.

A fly placed in front or in advance of the spinner blade instead of trailing behind may be the lure to end the wide bewildering assortment of lures confusing most anglers today.

Numerous anglers have criticized the lure for having the fly tied quite far in advance of the spinner blade. However, although some fish may strike at the fly, I have never had that happen that I could detect. The striking fish always grabbed the trailing hooks. As the old saying goes, one never chases a trolley car once it is caught, so unless the fly is some distance in advance there would be no need for the imitation minnow to dart continuously after the morsel of food.

Spinner blades, types and finishes do have something to do with the productiveness of this lure. The 'slim eli' or 'willow leaf' spinner represents the more true life-like shape of a minnow. While most all style blades will work, the two mentioned are on top of the list.

With finishes, here again we find numerous factors affecting its luring abilities. Streams and lakes where there is an abundance of 'shiner' minnows, a gold or brass spinner represents this minnow quite well. The many chub minnows, the metallic sheen or sparkle of the silver and nickel spinners imitate the light reflected from the glistening scales of this type minnows. The more life like the imitation, in this case, the better success you will have.

The type fly or pattern makes little difference. The loud and gaudy patterns, so they are easily distinguishable and can be readily seen moving in the water, are the patterns which are best. Patterns such as the Grizzly King, Parma Belle, Lord Baltimore and Silver Doctor are good as well as any of the many standard time tested patterns.

While no Company as yet has placed a spinner with a wire shank long enough to have a fly tied directly on the spinner shank on the market, they can easily be made. Many tackle supply houses can furnish spinner blades, lugs, beads, wire and the other necessary parts and even an amateur can quickly assemble a spinner with a shank long enough to incorporate the tying of a fly in front of the spinner blade.

Another method of making this lure is by obtaining two single blade spinners. Join them together and then remove the blade on the forward spinner and tie a fly in its place. (See illustration) This produces a jointed lure. Still another method of making this lure and by far the easiest and best, is by obtaining a double blade spin-



Cut the forward blade from a double spinner.



Wind the hackle feather around the spinner's shank.

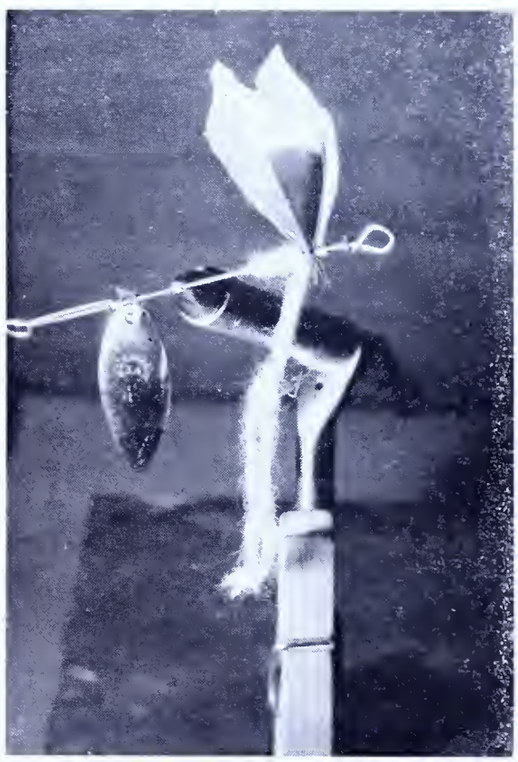
ner, remove the forward blade and tie a fly in its place. Place the spinner in a fly vise; clamp it securely and tie on a short piece of bright wool yarn in the position once held by the forward blade. Then, wrap the body material around the shank of the spinner to form the body. Next, take the tips of two wing feathers of a duck, or chicken and tie them to the shank to form the wings of the fly. Lastly tie in a hackle feather and wrap it around the shank in front of the wings; tie off the fly and the 'fly before spinner' lure is completed.

Types of hooks which can be attached behind the spinner can be either a double, treble or two single hooks placed scissor-wise making the lure partly weedless.

This unconventional spinner and fly can be presented to the fish by using a fly, bait, spinning rod, or can be trolled. A lead weight can be attached to the wire shank in front of the fly for greater casting distance and for increased depth when retrieving this lure.

In many instances, this new lure proved to be the lure that caused a number of good fish to be taken when all other artificial lures failed. I recall one day of angling the waters of Fishing Creek, in the Benton Area of Columbia County. It was high noon as I waded ashore to gain the shade offered by the mammoth willow trees. I had been fishing since the wee hours of the morning and not one good fish had been accounted for. I had been using dry flies, streams and small spinners and my total catch was only a few small brownies which were quickly released. Feeling somewhat tired I sat in the shade on the high banks and gazed leisurely into the pool beneath me. A location of this nature is always my choice when taking a rest so that any activity in the water can readily be seen.

Suddenly a minnow skimmed recklessly across the surface of the water. My attention was immediately drawn to it just as a hugh form made a swirl and all was quiet again. Undoubtedly a trout was chasing that minnow. I felt certain that it would take an artificial lure resembling a minnow just as quickly as that real one. I also concluded that other trout may be feeding and gorging themselves on minnows so I again waded out into mid stream and began casting. Still, no luck was



Tie in tips of wing feathers for the fly's wings and wrap body material around shank of spinner up to the wings.

had on streamer flies or spinners.

I looked through my fishing vest and produced several boxes of lures. Upon opening one, there was an assortment of these 'fly before spinner' lures in a variety of finishes and sizes.

Immediately I picked a silver slim eli spinner with a Rube Wood fly tied directly in front of the blade and tied it to my leader. I then waded down stream a short distance and began casting to a deep pool. The first cast was made down stream to where the minnow activity had been seen. I retrieved slowly and steadily, but felt nothing like a striking trout. I cast the lure again, this time some distance in mid stream and hardly had I retrieved three yards of line when I felt a sudden tug and a trout leaped clear of the water. The first good trout of the day and what appeared to be at least a pound.

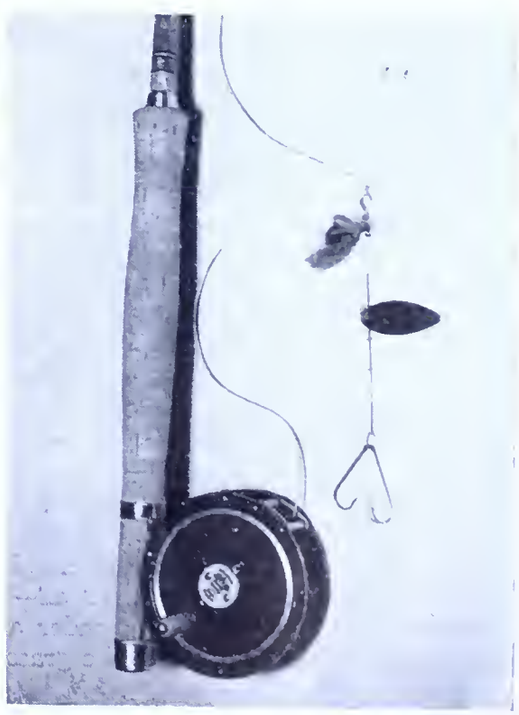
That trout's violent struggle was mixed with aerial display and long runs. That day's afternoon netted three more fine specimen all taken on this 'fly before spinner' lure. Having four fine trout I felt that a sufficient number and decided it would be a good time to try merely a plain spinner and a ring-eyed fly trailing in the rear.

I used this spinner with a trailing fly for nearly a dozen good pools where I had seen numerous trout on previous trips. However, each cast netted a blank until I again changed to this 'fly before spinner' lure and immediately began getting strikes. Some seasons past it was definitately decided that my tackle would include a number of these 'reversed' lures if nothing else.

I could continue to relate other times when I found this new lure indispensible. For trout and bass, the spinner or revolving lure has a fine reputation, but for even better results, reverse the flies' and spinners' positions—a fly tied directly in front or ahead of the revolving blade for in this position it is a true picture of a minnow chasing a fly.

It would well pay you to make up a number of these lures for your tackle. Following the illustrations it will prove to be a rather simple job.

Next time little action can be had on the conventional spinner and fly lures, 'reverse' the position of the fly and spinner and often it is found to really be dynamite!



This new fly before spinner lure can be used on a fly or spinning rod.

Like Father, Like Son-In-Law

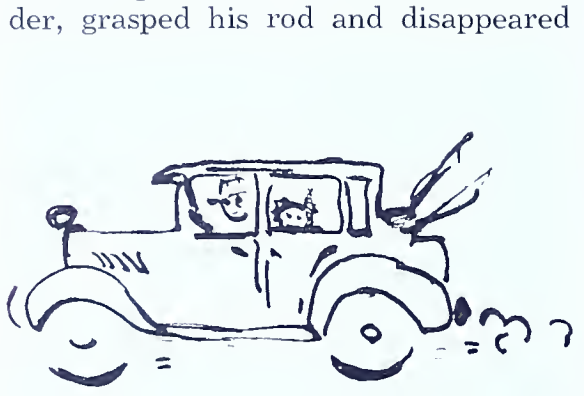
By Lois T. Henderson



When I was born, my father says he was delighted . . .

WHEN I was born, my father says he was delighted, but I strongly suspect that he immediately measured me to see if I were legal size. That's the kind of man my father was—and is. From the fifteenth of April until the end of bass season, he lives; the rest of the year he exists steeped in memories of the previous fishing season and filled with delightful anticipation of the coming season. During the summer months, he wanders about in a happy daze, and my mother has long since accepted her partial widowhood as one of those little things life hands out to the undeserving. We never started out on a picnic, a visit or a business trip but what all of Dad's fishing equipment rested snugly in the trunk of the car, just in case. Then, if the road chanced to pass by a frothy, sparkling stream, Dad could stop and "do a little plugging," his own pet phrase. It was never going to be for more than five minutes. Mother always carried her stationery box, and she did her lengthier corresponding then, while many of my quiet, uninterrupted hours of reading were done in the car waiting for my father to return.

Our vacations were of an unvarying pattern for many years. We went camping. None of these luxuriously fitted cottages for us; we pitched a tent. And what a wonderful experience it was for my brother and me. I can close my eyes now and see it all—the big, brown tent squatting under a huge, gnarled old maple tree, the grass hot and sweet from the summer sun and rich with the scent of clover, and, of course, through the trees, the sparkle of the Allegheny River. This was up where the Allegheny is still a young, silvery, laughing river, and fish flash through every ripple and lurk in every cool, shadowed pool. The first two days of each vacation, Dad worked busily around the camp site getting everything in perfect order. Then, like a man who has virtuously done his every duty, he put on his rubber boots, slipped his creel over his shoulder, grasped his rod and disappeared



Dad's fishing equipment rested snugly in the trunk of the car—just in case.

upstream. He always managed to create the air of a Lochinvar buckling on his flashing armor, taking up his two-edged sword and going off to rescue us from the fire-eating dragon. It never really mattered whether he came back with his creel full or empty. His eyes would be shining and his tongue would be glib with stories which were usually far more fascinating than any fish could have been. Now, I'm not inferring that my father was a liar; fishermen aren't—they just have happy hearts and vivid imaginations. But some of his tales lacked, shall we say, factual support. Still, what difference did that make when the huge fellow who got away provided such wonderful story material?

My mother went fishing with Dad after we children got a little older. Her first attempt has provided us with many minutes of laughter. They were in a boat, and she hooked a small sunfish. When she felt the intoxicating tug on her line, she shed all dignity and indifference. She began to swing her rod in ever-widening circles shouting, "I've got a fish. I've got a fish." Dad ducked each time the small, and probably terrified, fish whooshed by his head and finally, by dint of super-human effort, managed to subdue her hysteria and get the limp fish off the hook. But Mother had been touched by the magic, and soon there were two pairs of rubber boots in our car trunk.

From the time I could think at all, I have been convinced my father was wonderful. So it was only natural that I caught tiny fish on bits of bread with zeal when I was small and gradually learned to use a real rod. I remember tramping through briars, stumbling over rocks, wading through swamps, cheerfully suffering sunburn and windburn just to go fishing with my Dad. I packed our lunches, and saltless hard boiled eggs and dry cheese sandwiches tasted like nectar and ambrosia along a chilly Pennsylvania stream with the golden summer sun hot on our heads, and the sleepy air full of the good fishing talk. But, of course, I grew older and put on a thin air of sophistication. Then I began to see a few flaws in the tales that once had been sheer magic, and going swimming with the gang seemed more



The rest of the year he exists steeped in memories.

Drawings by Louis Tower



He began to urge dad to repeat familiar stories.

appealing than a fishing trip. I was probably an insufferable snob during this period of my life, but I finally outgrew it and took on a more tolerant view of the entire situation.

And then I got married. I'm quite sure I didn't fall in love with Al because he didn't know a trout from a catfish, but his complete indifference toward fishing didn't hurt his case with me any. At least, I thought smugly in my pitiful ignorance, I would never be a fishing widow.

Of course, I didn't take into consideration my father's influence and the sun-tinted tales he could weave on a dark winter evening. Tension starts to mount around my father on the first of March and builds up to the point where no one even sleeps the night of April fourteenth. Each time we went home, Al was exposed to this growing excitement. He began to urge Dad to repeat familiar stories, and he helped check fishing equipment. His fingers curved naturally around the polished handle of a slender trout rod, and he flicked the tip experimentally.

That spring, Al and Dad went fishing together, and when they came back, Al's eyes were shining in a way I recognized. But there was no use fighting it; it was inevitable. So we started buying the things Al wanted—a rod, a reel, a nylon line—and he and Dad lovingly handled each item and speculated what they would do when they could go out on a stream again.



If you think these are big, you should have seen the one that got away.

However, Al wasn't a real honest-to-goodness fisherman yet. He only told what really happened on a fishing trip and reported just on the fish he brought home. But a transition like that is a gradual one, and he slowly assumed the other traits of the Brotherhood. He decided that going camping was the only way to spend a vacation, but he consented to stay in a cottage. He, who had loved to sleep late mornings, started getting up before dawn to go fishing. And he kept staying later each time he went. But the day I knew the transition was complete, and the day I knew he was truly my father's son, as well as his son-in-law, was the day he came in carrying two seventeen inch pickerel and said, "If you think these are big, you should have seen the one I lost." I accepted my fate right then and there, and philosophically said, "Do tell me all about it."



He started to get up before dawn to go fishing.

I'll have to admit he had a good story. Only my father's long experience could have added more inches or embellished the fight that had whipped the water to a froth. But I'm not worried; Al will attain that peak of story telling ability someday, too. My father is such a wonderful example.

State Forestry Dept. Raising 50 Million Seedlings Annually

"Almost 100 million forest tree, shrub and vine planting stock are growing in the six nurseries operated by the Department of Forests and Waters," Admiral M. F. Draemel, Secretary of the Department, announced.

Draemel said, "The Department is rapidly approaching Governor Duff's goal of raising 50 million plants annually."

Draemel stated that almost 10 million of this planting material will be available for shipment during the season of 1949. In addition to the tree planting stock available for reforestation, over a million plants of shrub and vine stock, which produce food and shelter for wildlife, will be planted throughout the State Forests. Shrub and vine stock, as well as tree seedlings, also are available to private land owners, for the production of wildlife food and cover, prevention of soil erosion, and the reclamation of spoil bank areas.

The shrubs and vines include several species of dogwood, lespedeza, multiflora rose, hawthorn, crabapple, mountain ash, viburnum, hazelnut, bittersweet, dogwood, tartarian honeysuckle, wild grape, and other game food producing species, including a large number of walnut, which furnishes food for squirrels as well as for humans.

Individuals interested in planting shrubs and vines along fences, in abandoned corners of agricultural fields or on spoil banks, should secure the essential information, by writing to the Department of Forests and Waters, Harrisburg.

Among the species of forest trees available for planting for timber products are white pine, white and Norway spruce, Scotch pine, banks pine, pitch pine, black locust, green ash, black walnut and European larch.

The price of all seedling stock, regardless of the kind, is $6.00 per thousand, f.o.b. the nurseries.

The Department recommends spring planting in preference to fall planting, because trees planted in the fall are liable to be heaved by the frost; and are more likely to be injured by the wind.

Adventure of Two Wardens As Reported by L. E. Close

On Thursday, May 19 while checking small tributaries and camps of Whippoorwill Run, N. L. Erickson, Game Protector was struck twice on the fingers of right hand by a snake. I was walking ahead and stepped over a log, Erickson put his hand down as he came over and was either struck twice by the same snake or by two snakes, as we later killed two. He is in the St. Marys Hospital and coming along fine, in fact if we had not had to walk three miles to the car and then drive ten miles to the Doctor he no doubt would be up and around at present.

Mr. Erickson has always given me the finest cooperation and I was indeed sorry as he never would have been along except for his interest in woods and wildlife. He certainly showed plenty of "guts" through the entire trip. Of course I encouraged him by telling him I would not let him suffer as long as I had my gun.

Fish Are Where You Find Them

By L. J. Elmore

IN these days it seems that there are more fishermen than fish in the heavily populated sections of the Northeast, and finding a place to fish on a stream, is like finding a seat in a New York subway during rush hour. As yet we have not issued trout ration books, but on many of our streams the chances of becoming impaled on the hook of an angler, is more of a hazard to the crowded fishermen than to the fish themselves. The phrase, "as crowded as a can of sardines" would have more meaning to many if it were expressed, "as crowded as a trout stream bank on opening day." The good streams are whipped to a froth, and a great percentage of the trout netted, are hatchery grown fish. These fish are fun to catch and there are still many dandy wild trout to be had, but to some of us the catching of stocked trout seems too artificial, and also, we may like to have a little privacy when we fish.

To a true sportsman, the joy of fishing is not just the catching of the fish. To many, the clean out-of-doors, the music of the stream, the beauty of the sky and forest, and the easy quiet of the country is as important, if not more so, than the thrill of bringing home a mess of fish. This type of enjoyment is not found in a crowd. This is a kind of pleasure reserved for the solitary angler or, perhaps, the fisherman and his buddy.

To find nature's unspoiled solitude and, also, to be able to catch fish, is becoming more and more of a difficulty. The problem is not beyond solution if one is content to take smaller trout, small trout, yes, but trout spiced with the wildness and beauty of undisturbed forest and meadow. My way of finding fish and nature unperturbed by a crowd, has resulted in my seeking for streams that other fishermen overlook. You, too, if you want, can find these streams as I have. You may be laughed at, as I am, when you exhibit your diminutive catch of small trout, but you will have fish and you will have found contentment.

No stream is too small for me to investigate. No rumor of a stream goes by me without my checking it. Topographic maps are studied and restudied in an effort to find unfished streams. In most cases, as far as my quest for fishable streams is concerned, I am unrewarded; however, in practically all of my excursions for new trout streams I am amply repaid by the song of the birds and the beauty of fields and forests. After many attempts, my search may result in another stream added to my private collection; a collection that continues to grow larger; a collection of nature's wildest, loveliest nooks that are visited once or twice each season.

A typical example of the thrill of finding such a stream is given in the following account: One of my freshman Agriculture students told me of a small stream in the vicinity of his farm which he thought might contain trout. Few knew of the existence of the stream, and fewer, still, considered the fact that it might provide sport; therefore, we made plans and on a late April day our schemes became a reality.



Maryann Rissmiller of Pen Argyl, R. D. 1, displays a beautiful brown trout she caught from Lake Wallenpaupack, this fish was just 24 inches in length and weighed 4½ lbs. The photo was submitted by warden Ralph Singer who reports that over 300 brown trout were taken from the lake this season, many being notable fish.

School was dismissed for the day, and I believe teachers are as happy as the children when the last bell sounds, especially teachers who live to fish. A quick change into old clothes was made, and within fifteen minutes after the dismissal bell rang, Bud and I were on our way to his home farm for the purpose of inspecting his strawberry project and, of course, to fish. We praised the newly-started daylight saving time which gave us more time for fishing as we bounced along the spring-roughened roads.

At the farm we looked at Bud's newly set out strawberry patch and decided that with proper care it should produce well the following spring. Business being completed, Bud donned out-of-door clothes and, to the tune of our flopping boots, we rapidly crossed the fields and meadows toward the distant hill, at whose base trickled the tiny stream in which we planned to try our luck.

The brook was reached, and I found it to be just a tiny rill which tumbled through woodlot and pasture. The average person would consider it too small to contain trout, and for that very reason I had hopes that it would prove to be a trout stream. Few, if any of the pools were over four feet deep, and in many places the little creek was only a few inches deep. In a heavily fished area, such as in which we live, these are the only streams in which we can find wild, unstocked, scrappy trout; and it is in such creeks that we have the pleasure of not finding a fisherman splashing and surging in every rapid and pool. These are the hidden streams, the forgotten streams, the overlooked streams; and it is well that they are neglected by the vast majority of anglers, for they will not stand heavy and intensive fishing. The wise sportsman will take a few trout from such a streamlet each season, and he will be satisfied not to catch his limit. He will be willing to fish such a stream but once or twice each season.

We started fishing this particular brook downstream for convenience in reaching the stream and returning to the farm. We had decided to use worms and fine leaders. A small brown or gray, dry fly would likely have worked as well but would have presented difficulties when fishing certain spots because of the brushy nature of the stream. Bud made a wide detour of the stream and started to fish about a quarter of a mile below, and I trailed along behind. The rivulet was low and clear. The banks were rough, rocky, brushy, and in places steep. This was not the place to whip the stream with long casts. This was the brook in which to creep to a likely hole, and here we must remain hidden by rocks or trees, or stumps and drop the bait or fly gently into the "troutiest" looking pools.

My first stalk and cast resulted in nothing. My next, in a small horned dace. Creeping and crawling, watching so that my shadow or tread did

not disturb the wily trout, I went from pool to pool. Two tiny trout about five inches in length, were foolish enough to take my bait. These little fish are the main curse of small stream fishing, and this is the reason why it is imperative to use barbless hooks and use great care in releasing the baby trout, or a great many of the small fry will be killed. It is possible to release the fish without touching them. If one must touch them, the hands should be moistened in order not to remove the protective slime.

In about three-quarters of an hour I caught up with Bud, who was snugly hidden behind a large rock as he tried to entice the speckled beauties to take his bait. As I watched, his rod twitched and in a moment a shining red and yellow-speckled native squirmed and danced at the end of his line. The trout was soon brought to hand and put in his creel. The fish measured only eight inches, but that little eight-incher took more cunning and skill to catch than the three-pound trout that can be netted in Canada. He didn't fight like the three-pounder, it is true, but he was caught and caught fairly by an angler that had outwitted him.

I found that Bud had a seven-inch native in his creel in addition to the one he had just taken. Now it was my turn to fish ahead, so by cutting a wide detour away from the brook through the woodland, I approached the open pasture beyond. The stream was a little larger but still nothing but a rill. Sneaking quietly and carefully behind the bole of a yellow birch, I cautiously twitched my line into a tiny rapid, and the current carried the bait into the pool below. A sharp snap, a quick jerk and an eight-inch native was hooked. He made number one in my pocket. A few more pools were fished. They held trout but I was too clumsy and unskillfull to lure their occupants to strike. Creeping behind an old stump, I dangled my bait at the surface of the water of a quiet pool at the base of a fallen log. The stillness of the pool was rudely broken when a seven and a half-inch trout grabbed the hook as it barely touched the water.

The brook was now in very open country. The sun was low and my shadow was long. It seemed that all of the holes had to be fished from the west side, and my shadow proceeded my bait to every pool.

Just before the tiny stream entered the larger brook in the lowlands, it split into several trickles, and at the head of these a large pool of about ten by fifteen feet was formed by a brush jam. A silent, crafty stalk, a careful cast, and I was rewarded by a quick savage strike, and soon possessed a nine-inch, deep-bodied native of brilliant coloration. Another cast in the same pool, and I added a seven-inch trout to my string.

It was time to find Bud and see that he arrived home in time for chores. I retraced my way back up the brook and carefully approached and flipped my line into a likely pool that had yielded nothing on the down trip. A jerk and a pull, and I had another eight-inch trout. At this point Bud emerged from around the bend with two more eight-inchers. All in all, we had collected nine small trout from this tiny stream, and we were well pleased. We had not seen another fisherman and the trout would taste fine. Very likely we would not fish this stream again until next year. We cut across the meadows to the whistle of the woodchucks and the "kongger-ees" of the red-wings, back to the world of work.



A very lovely anglerette displays a very nice catch of trout. Marie Carter of 32 E. High Street, Elizabethtown, was caught by the camera of warden Robert Greener as she attempted to display her opening days catch.

The best way to find the tiny streams of small trout, is to gain the confidence of school boys. They know every trout and every pool in all their out-of-doors. Another method is to study topographic maps and investigate every blue line. Following larger streams and looking for small feeder streamlets, is seldom profitable. If the stream appears "trouty" it will have been fished hard, and you may miss many good streams for they have a habit of breaking up into many small, easily overlooked channels at their mouths.

Very infrequently small streams will thrill one with an "old whopper." In the brook in which Bud and I fished, Bud tells of catching a thirteen-inch native, a trout not to be sneezed at in any of our Northeastern Pennsylvania streams. I have caught ten, eleven, and twelve-inch, speckled trout in the smallest of streams, but I will admit that they are few and far between.

The big one always escapes, of course, and I still recall the day on a stream that at its widest, was never more than five feet across or over four feet deep. I was fishing up-stream, and I cautiously approached a pool of perfectly still water. Yellow birches fringed the upper end where the stream tumbled down a tiny, two-foot fall. From brush to grass clump I crept. I arrived at the perfect spot to flip in my line and noticed that I had to cast over a four-strand, barb wire fence. The cast was made, and as the fly hit the water, it disappeared; and I was fast to dynamite. The fish jumped and danced on his tail. He surged from one bank to the other. He leaped the small falls, but line pressure returned him to the pool. Only one thing marred the fight—my pole extended over the fence and I was neatly separated from my opponent. At last he was licked. He was spent and on his side. I gloated at his size and guessed it to be fourteen to fifteen inches. In order to get my hands on the trout I had to get over that fence. The wires were too close together to climb through and too fiimsy to climb over. I took a great gamble, and I gently leaned my pole against the fence and began to cross the fence at another point. As the pole touched the fence, my speckled friend gave one last surge, the line was slack and the fish was free.

The time of season is of little importance when fishing the small feeder brooks. In early spring at the first of the season and at the close of the season you will still find fish. Time of day may be of real importance. When the stream is low and clear, the dim light of early dawn and the faint glow of dusk, help the angler in taking the suspicious trout. One stretch of stream always seems to yield trout for me at dusk. The stream flows under a seldom-traveled road through two, four-foot, metal corrugated pipes and twines and twists through a rough pasture. During the bright daylight hours one can seldom, if ever, see a trout in the crystal-clear water, though there are five "trouty" looking pools within a quarter of a mile of the road. I like to arrive at this spot so that I

(*Turn to Page* 18)

PENNSYLVANIA REPTILES & AMPHIBIANS

A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

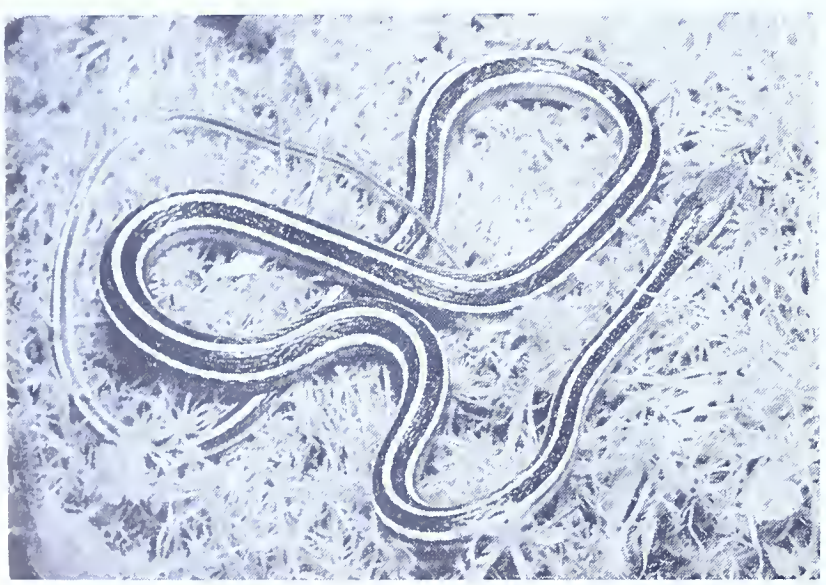
(No. 3. . . . . Snakes)



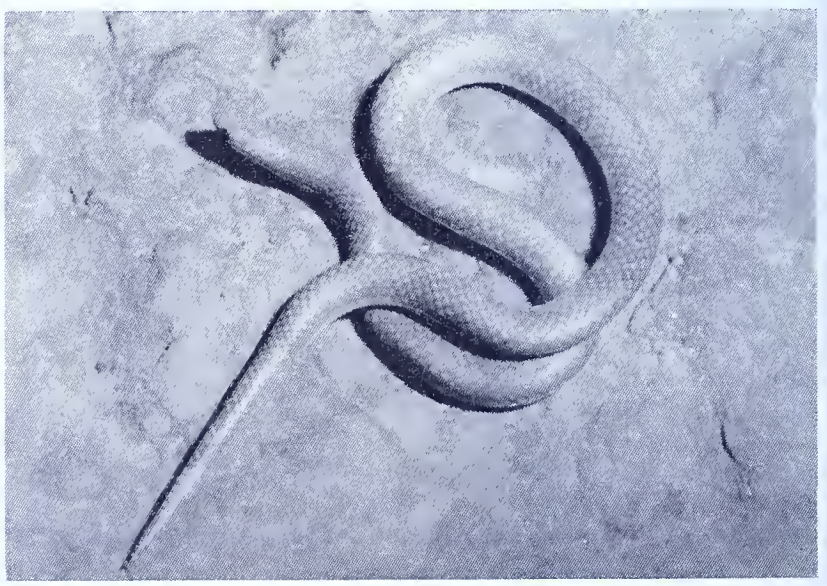
EASTERN GARTER SNAKE (Thamnophis sirtalis sirtalis) . . . Maximum length 3 feet, 8 inches; probably the commonest snake in Pennsylvania, occurring in a wide variety of habitats; normal pattern is three yellowish longitudinal stripes on dark background, but stripes are sometimes obscured; litters of from 14 to 40 young born alive; eats frogs, toads, fishes, earthworms; state-wide in distribution.



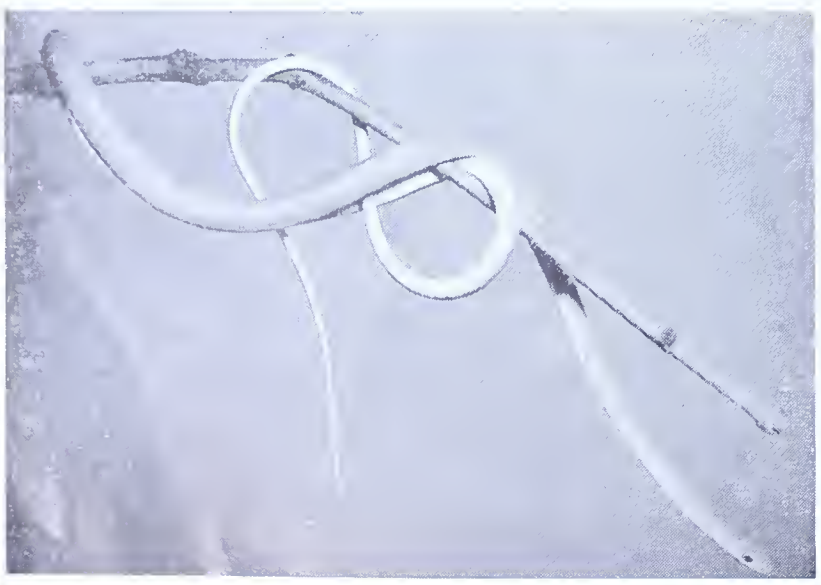
SMALL-HEADED GARTER SNAKE (Thamnophis brachystoma) . . . Maximum length 20 inches; formerly classed with western species as Butler's garter snake, but easternmost species has constantly smaller head and thinner body; has three longitudinal yellow stripes as in eastern garter snake but its very small head is distinctive; recorded only from Clarion, Elk, Forest, McKean, Mercer, Venango, Jefferson, Warren Counties in Pennsylvania.



EASTERN RIBBON SNAKE (Thamnophis sauritus sauritus) . . . Maximum length 32 inches; brightly patterned with three yellow stripes against a dark ground color; tail very long and slender as compared to that of the eastern garter snake; borders of lakes, marshy meadows and swamps are favored habitats; often eludes capture by diving in water; feeds on frogs, salamanders, small fishes; litters of 5 to 20 living young; recorded from 32 counties.



EASTERN WORM SNAKE (Carphophis amoena amoena) . . . Maximum length 12½ inches; has such smooth scales that its brown back and pink belly look waxy or highly polished; uninformed may confuse it with an earthworm because of similarity in appearance and in habitat . . . under damp boards, stones and even burrowing in ground; feeds chiefly upon earthworms and grubs; females lay 2 to 5 eggs; recorded from 13 scattered counties; nowhere numerous.



ROUGH GREEN SNAKE (Opheodrys aestivus) . . . Maximum length 3 feet, 6 inches; extremely slender, dainty and bright green; has ridges or keels on the scales of the back, distinguishing it from the smooth green snake; rarely found on the ground but usually in shrubs, vines and trees; feeds on insects, caterpillars and spiders; a southern species that reaches Pennsylvania in only 8 counties along Monongahela, Susquehanna and Delaware rivers valleys.



EASTERN SMOOTH GREEN SNAKE (Opheodrys vernalis vernalis) . . . Maximum length 24 inches; smooth scales, smaller size and terrestrial habits distinguish this from the other green snake; often called "grass snake"; very gentle and makes an ideal pet for children; like the rough green snake, this species lays its eggs in July (3 to 11); feeds upon insects, largely crickets and grasshoppers; recorded from 46 Pennsylvania counties.

Part 2.

OPERATION SHAD-FLY

Albert G. Shimmel

IT IS a privilege to witness the Shad Fly Hatch each year and in our case we have a natural condition which enables us to follow it twice.

It is a well known fact that the water temperature govern the emergence. We follow it regularly on two streams separated by only one ridge. The first stream due to the swamps that form its source warms up earlier in the spring. When the last Shad has disappeared from its placid reaches we drive four miles over the hill and find the first yellow subimagos reaching the surface. This stream has its beginnings in cold sand springs and averages as much as ten degrees cooler during the summer.

To be on the stream in time to meet the first vanguard of the hatch is a mixture of experience and luck. It entails the research of going over past records for the particular stream and guessing whether the season has been early, late or normal. After much profound and useless discussion we finally choose a day. We breakfast leisurely, prepare our gear without haste and arrive at the chosen stream by 10 A.M. We idle beside our favorite pools and if we have guessed correctly about 11 A.M. we see the first yellowish green fly drift like a small yacht down the quiet eddies then lift itself to the streamside foliage. Another follows then another. A small trout leaps in juvenile haste as a fourth leaves the water. A bulge beside an upstream rock which borders the current marks the disappearance of still another. Two more are sucked beneath the surface as we work slowly into position for the cast. The artificial brushes the rock and settles as softly as thistle down on a tiny pocket inches from the last rise. A moment later it is gone and as we tighten the line we feel the electric shock of a good trout. Minutes later we reach the next pool. Five actively feeding trout regularly mark its placid surface. The force of the current strikes the further bank to be broken by a log of drift wood wedged between it and a grass crowned snag of limestone. The yellow sailboats follow each other in an orderly procession down the line of drift and swing around the barrier. Occasionally one is caught in the eddy behind the stone. These vanish with barely a surface disturbance to mark their passing. Here is a cagy old campaigner taking his dinner at his leisure, secure in the safety of his lair and perhaps just a bit disdainful of the art of anglers. An overhanging grass stem is the help we need and with a whispered prayer to Lady Luck we work into position and make the cast. The stem bends a trifle as the leader falls across it and the fly settles on the edge of the eddy. An inch then two inches it floats feeling its way as it were toward the main drift line. We tighten the line and the leader lifts the fly and leaves it swinging a scant inch above the surface. The water heaves and a wide mouth engulfs our feathered fraud. With a lift of the rod we drive the steel home and give an extra tug to be sure it is secure. Driving up into the heavy current he shakes from side to side as he twists and turns trying to rid himself of the clinging cheat. After a time he sulks in the deep water. Slowly we increase the bend in the rod then reaching up pluck the taunt line as if it were a harp string. The rush that follows with angered suddenness is met by a right angled strain of the rod and he is steered away from the dangerous sunken rocks to spend his strength in the shallows. Minutes later we corner him in a graveled cove and push him spent and gasping to the grassy bank. There's a cruel rakishness to the curved lower jaw that marks a confirmed cannibal trout. The pleasure we have in him is heightened by the thought that here is one trout, better in the creel than in the stream. Only at rare intervals do trout of such size fall to the witchery of a floating fly and the split bamboo.

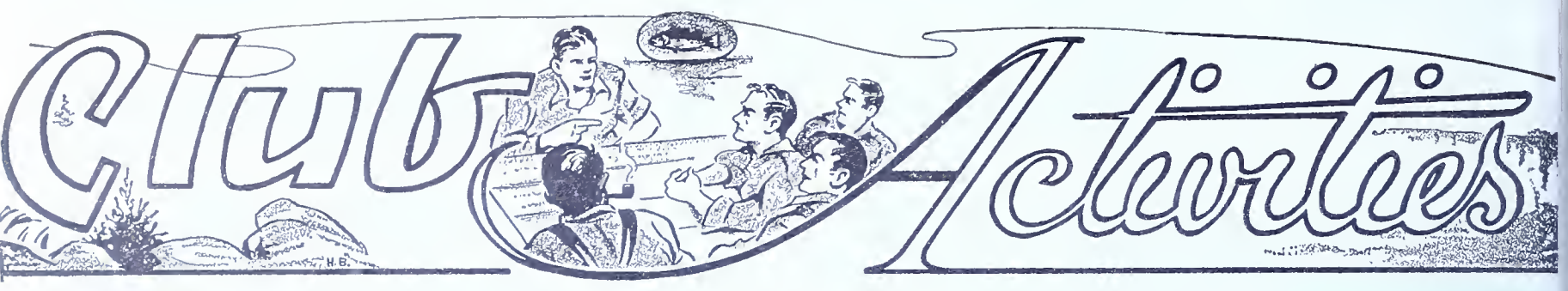
Trout are not the only game that fall for the artificial during the hatch. Two years ago I entered the stream just as the Shads were beginning to fall. A good hour of light remained, the water above was undisturbed, the anticipation of some good sport was mine. The first pool yielded three good trout, the second three more all of which were returned to their element. A swirl near the head of the pool gave promise of a large trout. Carefully I worked into position and as the fly fell a pound trout took it before it touched the water. He fell backward and the commotion sounded rather loud in the evening stillness. Contrary to tradition he fought at the surface and soon was spent. As I stooped to release the fly I was startled by a greeting from the alder screen that bordered the pool. Seated on a stone in the shadows was a fellow townsman. He had been camaflouged so well that I had unwittingly invaded his pool and committed a breach of angling courtesy. Apologizing for my seeming bad manners I was met by a barrage of questions. My friend had marked my progress up the pools and the enthusiasm with which the trout responded to my white bodied spider. He had been fishing bait which had been ignored. Opening my fly book I presented him with a mate to the fly that hung from my leader. When I left the water at the bridge above under the compulsion of darkness my new found friend was on hand. He displayed a brace of fine trout and a smile that told its own story. Another fisherman had changed to an angler, hooked and landed during the Shad hatch.

An angling acquaintance of mine has a habit of fishing with live Shad during the hatch. He carries a tube of model cement and some extra fine dry fly hooks among his equipment, fishes with a fine leader and is very successful in taking large trout. His method is simple. He places a drop of cement on the hook shank, catches a natural and holds it on the cement covered hook and blows softly until the fly adheres. He then drops the fly near a rising trout. The fly struggles vigorously to escape creating quite a commotion. What trout could resist?

It was half way down a boulder strewn rapid that he swung his hat in effort to capture a dancing Shad in order to replace one that a trout had appropriated. The stiff current pushed

(*Turn to Page* 17)





Holtzman Elected President

Ralph R. Holtzman of South Williamsport is the new president of the Consolidated Sportsmen of Lycoming County. He succeeds John H. Bender who served as head of the active north central club for the past two years.

Other officers for 1949 are: Frank Bren of Jersey Shore, first vice-president Roy C. Peterman, second vice-president; Don Starr, secretary; Walter Nicholoson, treasurer; and Charles Winter and A. H. Hollenbach, representatives to the State Federation.

Sayre Sportsmen's Club

The Club held its annual banquet recently with an attendance of 615. The affair was held in the Sayre High School and the meal was prepared and served by the Sayre High School Parent Teachers Association.

The following officers were elected: Pres. Ernest W. Parks; Vice-Pres., Dr. J. C. Black; Secretary, Vern A. Hicks; Treasurer, Andrew J. Zeller.

Tioga County Consolidated Sportsmen's Assn.

The Association is conducting an essay contest to determine the eligibility of two boys to attend the Conservation Camp this summer. Louis Stevenson of Wellsboro is chairman of the Contest Committee.

The Association has two resolutions ready to present to the next Division. One to the effect that it shall be illegal to throw any species of fish out on the bank of a stream or other body of water and that such action shall be punishable by a fine of $10 for each fish so disposed of. The other would impose a fine of $100 for the throwing of rubbish, garbage, etc., into any stream, lake or other body of water.

Punxsutawney Sportsmen's Club

The first six weeks of the 1949 membership campaign of the club netted them 1,100 sportsmen, according to Secretary G. H. Elenberger. Last year's roster included 1,550, including 61 juniors.

Conservation Is Speaker's Theme At Sportsmen's Banquet

Conservation-mindedness was stressed by the Rev. E. B. Hanks, pastor of the Holy Trinity Lutheran Church of Jeannette as the means for the United States maintaining its world leadership.

Speaking before 150 persons gathered for the annual banquet of the Latrobe Sportsmen's Association at Sleepy Hollow Tavern, Rev. Hanks placed national resources on a par with constitutional government as factors making for this nation's greatness.

Unless we conserve our soil, minerals and water, we will be unable to sustain our population or help other needy nations, he declared.

He urged the following six-point conservation program:

Putting the nation's 460 million arable acres into production.

Stopping the inroads of soil erosion.

Halting the needless slashing of forests.

Redeeming streams and navigable waters.

Conserving and replenishing underground water supplies.

Mining coal more judiciously.

"Our future depends on how we conserve our resources," Rev. Hanks, said pointing out that "we can't continually pump out of nature without putting back into nature something to pump again."

Sportsmen should be interested in conservation, not for purely selfish purposes but "for the greater good and higher betterment of the world in which we live," he stated.

Lester Gibson, president of the club now in its 25th year of organization, made the address of welcome.

Western Clinton Sportsmen's Assn.

The club will sponsor a boy at the Conservation Camp and a contest is under way now to determine who the lucky lad will be.

In spite of high water and rather chilly weather trout catches have been reported pretty good. One or two stories have come in about trout that were too big to be landed. Another Waltonian reported that on a certain day he saw more trout in a small area than he could remember seeing in a similar area in 25 years.

The sportsmen's meeting in the High School Auditorium on April 7 was pretty well attended. The pictures were excellent and J. Allen Barrett of the Harrisburg Office of the Fish Commission gave a very interesting and inspiring address.

Byrnedale Sportsmen's Club

The newly organized club in Elk County has voted to become affiliated with the local, division and State Federation. The upstate sportsmen's club already has 140 members after the second meeting and expect another 60 or 70 by early part of May.

2nd Annual Better Fishing Rodeo Date Announced

The Second Annual National Better Fishing Rodeo for Boys and Girls will be held at cities across the nation this year on Saturday, August 27, according to announcement made by LeRoy H. "Cap" Dorsey, president of Better Fishing, Inc., the national sponsor.

Better Fishing, Inc., a national not-for-profit organization of sports fishermen, located at 509 S. Wabash Ave., Chicago, Ill., will give a grand prize consisting of complete casting rod, reel, line and lures to each local boy and girl champion.

Last year, on August 28, close to a million youngsters simultaneously wet their lines at 135 cities in 44 states and Hawaii. Mayors of these cities appointed citizen committees who supervised the local events and awarded prizes.

By appointment of citizen Rodeo Committees, issuing of proclamations and active personal participation, the Mayors were primarily responsible for making highly successful the first annual event of this new youth movement. Mayor Harman W. Perry of Ogden, Utah, who now signs his letters 'Mayor and Rodeo Boss,' wrote President Dorsey saying, "I am most interested in your plan to make fishing available as a recreational outlet for the youngsters of Ogden and I heartily endorse your plan." Mayor Frank J. Warren, Topeka, Kans., stated, "I am more than happy to help sponsor a program that will help make better fishermen and at the same time better citizens." Chief Burgess William A. Griffith, Pottstown, Pa., wrote: "This rodeo seems to me to be one of the prize ideas of the year as it enables a much greater number of children to participate and enjoy a healthy outing than anything our community has yet undertaken." E. Spencer Walton, mayor of Mishawaka, Ind., said: "I hope we can continue this as an annual event."

"Cap" Dorsey, founder of the National Better Fishing Rodeo for Boys and Girls, in announcing the National Rodeo dates said: "The spectacular success of last year's Fishing Rodeo, which was an official part of juvenile recreation activities, in cities in 44 states, is completely overshadowed by requests for participation in this year's event. Mounting interest in boy and girl fishing activities as a means of centering attention on sport fishing for its moral, recreation and health-building benefits, indicates that more than 500 cities desire to participate in the Second Annual Better Fishing Rodeo for Boys and Girls to be held on Saturday, August 27."

Dorsey stated that Better Fishing, Inc., is seeking the cooperation of all national youth organizations. They will be urged to organize local youth fishing events during school vacation months. These activities, he pointed out, would keep the youngsters wholesomely occupied and better prepared to have fun at the city National Better Fishing Rodeo before returning to school. According to Dorsey, a number of cities and towns last year built fishing ponds, and, aided by State Conservation Departments, stocked their lagoons, ponds and flowing waters for kid fishing. He strongly stressed that such action furnishes a means of recreation, during the out-of-school period, which is useful in building vigorous bodies, healthy minds and strong characters.

Clearfield Anglers Repair Bad Road for State Fish Truck

Volunteer work by sportsmen of the Coalport-Irvona Game and Fish Association in Clearfield County enabled the Fish Commission truck to get back into the woods and stock an otherwise inaccessible water.

Fred Hoffman, president of the club, reports that their members took time out on two Sundays to repair a back county road for the State truck. Net results, the boys received the fish and the truck made the trip without breaking a spring. Secretary of the group is Charles Ginter.

Mont Alto Fish & Game Protective Assn.

Wilbur Kline has been elected president of the Association, according to Secretary Gerald E. Flood. Other supporting officials include: John Dull, vice-president and James Kline, treasurer.

Perkiomen Valley Sportsmen's Assn.

The Association was well represented at the annual banquet of the Montgomery County Federation of Sportsmen's Clubs held April 27 at Telford. The gang won five of the door prizes. Good movies of fish being stocked in county streams were shown.

Highlight of the evening was the address by Judge Ladner, who gave a complete report on the reclamation of the Schuylkill River. He stated that the work above Reading has progressed to the point where the water is now clear. By 1952 he expects the river to be cleared to Norristown after which the Federal government will step in and take over from Norristown to the Fairmount dam in Philadelphia. Presently the work is being started between Norristown and Pottstown and excellent progress is being made.

Enrollment Approach Unique

The Great Swamp Fish, Game and Forestry Association of Quakertown has a new sales approach to secure 1,000 members for the current year.

The pamphlet mailed to its members runs a line of sound logic like this: "Who was responsible for the planting of more than 50,000 evergreen trees in this area? Who was it that has made the only efforts by any group or individual to improve stream conditions? Cooks Creek now a major trout stream stocked by the State and improved by WPA through the efforts of our club. Swamp Creek dams repaired, etc.

"Who has bought thousands of rabbits and pheasants the past 15 years or more for stocking purposes? Who was responsible in a large part for the farm-game projects in our area? The small game refuges. Who has been responsible for organized efforts of feeding game during the winter when natural food was scarce or non-existent? Who has cooperated with our Local Game Protectors in stocking rabbits and pheasants; the fish commission in stocking fish; the farmers, in efforts to increase friendly relations?

"Fellow sportsmen, these are but the high spots in the many activities of your club. Now ask yourself this final question. If there were no Great Swamp Fish, Game and Forestry Association would any of this work have been done?"

That should bring some definite results.

Grand Banquet In Lancaster County



At the Speakers Table and reading from left to right are: Clayton Shenk, President of the Lancaster County Federation of Sportsmens' Clubs; Hon. Thomas D. (Tom) Frye, Executive Director Pennsylvania Game Commission; Hon. Daniel B. Strickler, Lt. Gov. of the Commonwealth; Hon. C. A. (Charlie) French, Executive Director, Fish Commission and Robert E. Fasnatch, Sec. of Lancaster County Federation of Sportsmens' Clubs.

All Skish National Tournament

The 1949 All Skish National Tournament which will be held at Lincoln Park in Chicago, August 26-27-28, will be co-operatively sponsored by the Chicago Park District, the Lincoln Park Casting Club, Jackson Park Casting Club, Chicago Fly Casting Club, McKinley Park Casting Club, Marquette Park Casting Club, Sherman Park Casting Club, Columbus Park Casting Club and the Sportscasters. This event promises to be the largest of its kind ever held in the history of target casting.

A great number of the nation's leading personalities in the casting game have announced their intentions to take part in this tournament. America's greatest exhibition casters will perform between each event. The top outdoor writers will be on hand for full coverage. Records will be established and recognized nationally as official records made with regular fishing tackle. In addition to accuracy bait, distance bait, accuracy fly, distance fly, bass bug and distance spinning, there will be a special fisherman's event held under actual fishing conditions. If you can flick a plug through a pocket in the bushes when fishing from shore and drop your lure in a likely spot, then you will have a chance to win one of the most practical casting events ever offered the fisherman. Every event will be staged on water for fishermen, by fishermen and for a fishing public.

Highlighted with the presence of Conservation Directors of the state the Lancaster County Federation of Sportsmens' Clubs Banquet held in the American Legion Banquet Room of the Ephrata Post was hailed as the finest in the history of the county. Attended by some 250 sportsmen of the down-river county, the affair proved to be one long to be remembered by those lucky enough to be in attendance.

Discussions of timely interest were delivered to the gathering by Lt. Gov. Daniel B. Strickler, the Honorable C. A. French, Executive Director, Pennsylvania Fish Commission and the Honorable Thomas D. Frye, Executive Director of the Pennsylvania Game Commission. Discussing the recent act of the General Assembly and which was written into law by Governor Duff on April 13, Mr. French said in part "This bill will restrict sucker fishing during the spawning season and prevent the illegal taking of any trout before the season opens. Our records show that too many fishermen go fishing for suckers just after we have stocked a trout stream." The Director reviewed the stocking program conducted by the Fish Commission previous to the opening of the season on April 15 and held that if the fishermen themselves would play the game fair there would be plenty of sport for all. He expressed his interest in projects which serve to help the youngsters of Pennsylvania and placed his stamp of approval upon the opening of a proposed juvenile fishing pond known as Long Park Lake.

The banquet was a grand affair.

Bridges of Kings Creek

By Jim Hayes

IT was quiet by the bridge pool. The mid-morning somnolence lay heavy on the land. Kings Creek churned sluggishly in the deep pool. Through the ravine it bubbled over a chain of rapids, angry water, dark and hurried. Then it passed quietly into the bridge pool and rested before slipping over the shallows and on down the valley.

Clearly not a day for fishing. The upper pools were dead, undimpled by even a halfhearted rise. Yet in the depths of the bridge pool the trout were on the feed. My take was four browns. That evening the entry in my Fishing Diary read:

Took four nice browns at the Bridge Pool on Kings Creek. Trout weren't feeding elsewhere; but, as usual, the bridge paid off. Weather clear, stream low. Lure: Spinner fly.

I don't know what there is about a covered bridge that makes trout like to haunt the pool under it. The idea that passing cars jolt insects from the boards is probably true. There's more to it than that, though: Something to do with the shelter and coolness that appeals to a trout's introvertic nature.

Since the days of Walton the bridge has been a logical and favored meeting place for anglers. "Meet me at the covered bridge" does more than designate a fixed location on an ever-changing stream. It is a call to good trouting. For no matter how convenient the water or how many anglers have preceded, the bridge pool can always, it seems, be depended upon to hold at least several more good fish.

Kings Creek, one of my favorite trout streams, has several old covered bridges; rickety, weatherworn, tottering, but dear to the hearts of fishermen. Equipped with ears and a tongue, those ancient spans could tell many a fascinating story.

Beneath the upper bridge on the Kings may be found a splendid pool, the home of many a hefty brown trout. On the far side, leading to the embankment, a rock ledge overhangs the deepest water. Under that ledge lurk some . . . but wait.

Being close to the road—under it, in fact—this pool is the first water to greet the fisherman as he begins his day. Consequently, no day passes that some dozen or more anglers do not test their skill on that pool. Yet it was on the closing day of a season, and at the hands of an attractive anglerette, that I saw Kings Creek give up its monarch.

The lady's husband had given her a spare rod, a pailful of minnows and parked her by the pool while he fished the more choice water upstream. Thus disposed, she cast her minnow under the ledge and sat down to await results.

"Any luck?" I inquired of her as I came to the pool. No, not even a nibble. But no matter. She'd never caught a trout before, and didn't expect to land one this time. Her husband, you see, was the fisherman. She just came along for the ride.

She yawned and began reeling in to see if her minnow had drowned, or died of old age, or something. As she took up slack, the line jerked and began moving upstream. She squealed and set the hook. What followed was the wildest twenty-minute battle that the old covered bridge had ever looked down upon. When the waves subsided and the froth passed downstream, a mammoth four-pound brown trout lay flopping on the bank.

I killed the fish for her and hastily departed. A man's heart can stand only so much. Besides, the prospect of witnessing the reunion between the lucky lady and her returning mate was not particularly enticing. At best it would have been stupendously anti-climatical.

Apart from being the stage for occasional streamside comedies, there is nothing more attractive than an old-time covered bridge, gracefully spanning a lovely stream. Its planks secured to either bank, it looks benignly on the water slipping beneath it, and on the seasonal parade of anglers trapsing up and down the streamside. When showers slant from grey skies, the fishermen take cover under the bridge, compare catches, swap lies.

Another bridge, again on Kings Creek, that holds special meaning for me spans a stretch of steep rapids. It is a rocky, white-water stretch of water here, cascading between the mountain slopes, with this wooden bridge, sidewalls mostly off, crossing at the wildest part. The scene has an Alpine flavor, as if that particular place had been transplanted from Nor-



Rainbow bridge . . . with its enchanting alpine demeanor.



A covered bridge on King's Creek—trout waters par excellence.

way. Even the bridge has a Nordic appearance.

You can't look at that dashing water without thinking of rainbow trout. For this reason, together with the rainbow trout inhabiting that part of the stream, we, in the custom of anglers of naming their favorite pools and places, have bestowed on the span a name: Rainbow Bridge.

Now I am by no means a fast-water fisherman. But when I first beheld Rainbow Bridge, with its enchanting Alpine demeanor, the angry rapids splashing beneath its planks, the spray-moistened ferns nodding with the flow, and heard the muffled surge of fast-falling water, I knew that here was a place that no angler could bypass.

But the Rainbow Bridge water is an exception to the rule. Most bridges cross at low places in the valley. The water under them, therefore, is usually deep and serene. As to tips for fishing these pools, it should be noted that rarely is such water good for fly fishing. Deep fishing with minnows and nightcrawlers seems to net the best trout. Also, tiny metal spoons, spinner flies, and bucktails are often good lures.

Yet for all the angler's skill, one's luck at the bridge pool often boils down to . . . If the gods are kind, trout willing, and Mother Nature notwithstanding. Still, as Walton said, it's a contemplative sport, with the taking of trout only incidental to the pursuit. By that reasoning, the fisherman's day might well be spent by the bridge pool, quietly angling, and reflecting, perhaps, on the country quietude and the firm sovereignty of the old covered bridge.

See yuh at the covered bridge.

Pollution Program at Work

While fishing in the Swatara Creek opposite Hoffer's Park near Middletown, Pa., Ralph M. Davis of 127 Brown St., Middletown caught a beautiful 14" brown trout. The flesh of this trout, says Mr. Davis, was pink and was a very fine specimen. Mr. Davis was jubilant in claiming that the rehabilitation of trout in the Swatara can only be attributed to the fine stream clearance program initiated by Governor Duff.

Warden Close Reports

N. L. Erickson, Game Protector, Cameron County, captured a young Great-horned owl. In the nest he found two suckers, one about 8 inches and one about 12. They were very fresh and both heads had been eaten.

What's New in Fishing Books

Reviewed by Hugh Johnson

Fresh Water Fishing by Arthur H. Carhart (A. S. Barnes Co., New York—$5.00), was published last month. When I first heard about it, I thought, from the title alone, that it would be a lot of old stuff dressed up in new vocabulary with a few pictures thrown in to give it class. But I got it anyway, and *Fresh Water Fishing* is convincing proof that there is always room for another *good* fishing book, no matter how crowded the shelves of angling literature already may be.

Mr. Carhart's simple classification of fresh water game fish into three groups—cold-water fish, cool-water fish, and warm-water fish, and the way he develops his subsequent discussion of types of lines and tackle and types of fishing on this basis, is a reasonable and fresh approach.

The author does not go into discussion of stream-craft or lake-craft, how to play, creel, or cook a fish, or how to splice a line or tie knots. Wisely (and correctly), he apparently decided that all that is covered in other books and in magazine articles. Instead he does a thorough job on some of the most important factors in fresh water fishing which are frequently overlooked or just brushed over by many writers. For example, there are excellent chapters on bait casting, fly casting, and spinning, and what makes these the best chapters on casting that I have ever seen is the fact that casting techniques are illustrated, clearly and in detail, with *many* pages of accurate line drawings. The chapter "The Hook Is the Thing" is a fascinating essay covering not only all the hook facts of working interest to anglers but development of the hook from the prehistoric stone gorge to the new hooks of 1949. The same simple but complete treatment is given to chapters on the various kinds of rods, reels, lines, leaders, lures, and on fish identification.

An interesting feature about the chapter on trout flies is the grouping of various patterns according to regional preferences, the result of the author's geographical analysis of the orders for flies received by a number of leading dealers. The Royal Coachman leads the list in six of the seven geographical groups, including the Northeastern, and in the "National List." Surprisingly, the Quill Gordon doesn't appear on *any* list, even the Northeastern, and many Pennsylvania fishermen—to whom the Quill Gordon is ace-high and second-to-none, will challenge that omission.

Fresh Water Fishing is a carefully, smartly designed book, and is beautifully illustrated with 18 pages of kodachromes of lures and flies and a wealth of superb pen sketches. Any book lover would be proud to own this book, and all fishermen, especially those who fish fresh water around the calendar, will read it with profit and pleasure.

A bachelor is described as a fellow who has been fortunate in his love affairs.

IT'S FISHING THAT COUNTS

(*From Page 3*)

"Whatever it is, here she comes," cried Guy. Whereupon he grabbed the line and heaved.

For a moment there followed stiff resistance. Then the thing came up with a rush, cleared the stern and landed in the boat squarely at my feet. It was a four-foot eel!

"Wow!" yelped Guy while I tore for the other end of the craft in d o u b l e quick time.

Well, that slippery creature slithered from one end of the boat to the other, upsetting everything and creating a general mess.

At last I grabbed an oar and aimed a mighty blow as it passed under the seat upon which I stood. It was a clean miss and resulted in a loosened plank in the boat bottom.

As it once again banged its way to the bow Mike was waiting for it with a gunny sack in one hand and his belt knife in the other. After grabbing the fish back of the head he soon hacked off the latter. That finished it. Its exact length was three feet, six inches. Not a bad discrepancy from the estimated four feet when you consider the excitement.

So, with that most fitting episode we closed our session of sissy fishing and made for home and a welcome bath. I know positively that the eel never left the boat bottom, yet, I for one was covered with slime from head to foot.

Since that trip I have come to the conclusion that the kind of fish caught do not necessarily make the fishing, for what I disparagingly referred to as sissy fishing now looms as one of the outstanding and enjoyable piscatorial episodes of my life.

The foregoing is mindful of our finding of so-called Hidden Lake here practically in the environs of New Castle; a spot passed up by scores of fishermen, including myself, and later finding that it was filled, yes filled, with some of the biggest and fightingest small mouths with which we've ever had the pleasure of enticing with a plug. Indeed, it was the lesson taught by my New Hampshire experience that led to the discovery of Hidden Lake. However, that's another yarn.

Most men are like worms in the grass. They wiggle around awhile, then up comes some chicken and grabs 'em.

A traveling man may know all the best hotels and still have to have the chambermaid tell him where to stop.

This Sportsman Puts Fish Back

Arthur E. (Dad) Johnson, of Shippenville, has won the praise of the county Bucktails Association for his fine record as a sportsman and conservationist.

The 75-year-old fisherman kept records of his catches during 1947 and 1948. In 1947 he caught 66 trout between June 13 and July 31. He killed only nine and released 57, ranging from six to 12 inches in length. Some were caught several times, he noted.

From August 1 to October 31, 1947, Mr. Johnson caught 162 bass, bluegills, perch, bullheads and fallfish. He kept only two, and released 160, all in good condition. That made 11 fish kept out of a total of 228 fish caught during the season. He averaged nine fish per trip, and notes that 90 per cent of them were of good pan size.

Mr. Johnson's report on Millcreek for 1945 shows 96 trout caught, and one killed, freeing 95, mostly without lifting the fish from the water. His total catch for the year was 237, of which he kept only 34.

Pitesburgh Post Gazette

May Days

The leaves which Autumn withers
The birds which then take wing,
When Winter's gone, come back again
To welcome lovely Spring.

Old fields are carpeted anew
With grass as green as jade,
And everywhere wild flowers bloom—
It's like a long parade!

With woods and fields both verdant
In this lovely month, so gay—
No wonder larks sing sweetly
All through the livelong day,

While bobolinks pour out their song
As they hover on the wing,
And soft clouds idly drifting
Seem to pause, to hear them sing.

The days pass, oh so swiftly!
Night's curtains fall too soon,
But the last days bring the roses
And the lovely month of June.

J. A. McHugh.

STREAM-SIDE LIFE

The Spring Peeper

By ROBERT LEO SMITH

For months the ponds had been silent. And then one warm evening in March, a clear, shrill note came from the pond, and another and another, until half a dozen sounded from here and there about the water. It was the voice of the spring peeper, announcing the return of spring.

As March turns into April, and April gives way to May, the chorus grows until the night vibrates with the high-pitched voices that can be heard half a mile away. If you should approach the pond, the chorus ceases. But after a short silence, the peepers, one by one, start up again. You may be surprised to find one chirping in the grass clump right at your feet. A careful search with the flashlight will reveal them, disclosed by their swollen vocal sacs, gleaming like big creamy bubbles. If no sound or movement disturbs the peepers, they will continue to sing in the full glare of your light.

The peepers may begin to "peep" in the warmer days of January and February, but their choruses do not become conspicuous until the beginning of the breeding season in March. From then on their calls continue undiminished until June. During this period each female lays about 800 eggs, fertilized by the male as she ejects them from her body. The eggs are attached singly to grass, leaves and other vegetation near the bottom of shallow pools, ponds, marshes and ditches. In less than a week the tadpoles hatch and in 90 days transform into adults. After the breeding season, the peepers leave the ponds and scatter through the swamps and meadows where they are occasionally seen and rarely heard. In fall before they disappear into winter hibernation, the peepers may call again but not in the great choruses as in the spring.



The spring peeper, known to science as *Hyla crucifer,* is one of our smallest frogs. It ranges in size from three-quarters to one and a quarter inches, the females being the larger. More than 300 are needed to make a pound. The peepers vary in color from brown to greenish-grey; usually the females are lighter in color. Their legs are marked with transverse bands and their toes terminate in small disks, a characteristic of all tree frogs. An oblique cross is always visible on the back. It is from this that the peeper has earned its species name, *crucifer,* meaning "with a cross."

OPERATION SHAD-FLY

(*From Page* 11)

against his booted legs and spun him half around. He did a jig step and then met the water in a sitting position. Luckily he had placed his rod on a projecting branch before the incident. He emerged dripping from the stream, captured another Shad and successfully negotiated the balance of the rapid, gathering two trout on the way and came to my pool. He dripped water like a saturated sponge but his grin was the sort that takes more than cold mountain water to wash away.

The nymph form of Ephemera guttulata lives more than one season under the water before emerging as yellow subimago. Having found specimens of approximately half the size of a fully developed specimen less than two weeks after the hatch is completed convinces me that they spend at least two years before attaining adult size. They feed on microscopic plant material and burrow under from two to six inches of sand, gravel and drift on the stream bed. I have observed scuttling for hiding at night as I searched the stream with a light.

This may also account for their appearance in the stomachs of trout taken early in the morning.

The yellowish form of the subimago is a slow sluggish flier compared with the white bodied imago that dances above the stream at evening. Indeed the critical period of its transformation seems to be the moment it tries to lift its heavy body from the water. The vibrating of its wings attracts fish in no uncertain manner. Many are caught by the water and whirled away or form a meal for passing birds or dragon flies.

It is the opinion of many observers that the fly hatches are much smaller than in years gone by. There may be some degree of truth in their assertions. The fluctuations of the stream in high and low water could easily affect the numbers of insects. First by exposing a portion of the stream bed to drought conditions; second, by silting over nursery locations; third by scouring the stream bed and thereby washing away large numbers of the immature insects; fourth, pollution, kills the microscopic life that furnishes their food. If due to lack of conservation measures we foster a condition of pollution and low water conditions our exciting Shad Fly hatch may very easily become only a memory.

Philadelphia Fisherman Drowns While Fishing Loyalsock Creek

The season's first drowning fatality in Lycoming County occurred Saturday morning, May 14, when Charles Edwin Bill, 28, of Philadelphia, lost his life in Loyalsock Creek at Shore Acres, where he began fishing about 5 a. m.

The body was recovered at 4:35 p. m., by members of the Loyalsock Volunteer Fire Department, summoned to the area when other members of Bill's fishing party missed him around noon.

A six-man fishing party, including Arthur Vigdor, Seth Garlick, and his three sons—all of Philadelphia—arrived at a camp near Farragut about 1 a. m. Four members of the party began fishing about 5 a. m., near the Sportsmen's Memorial Grounds.

Three of the fishermen were together, but Bill was alone. He was missed about 10 a. m. His friends looked for him several hours before appearing at the Montoursville state police barracks for help about 2:30 p. m. State police and Loyalsock volunteer firemen immediately joined the search. About five minutes after a boat was put into the water at Shore Acres the body was recovered.

The Philadelphian was an electrician, and he is survived by his wife. He was a member of the Consolidated Sportsmen of Lycoming County.

The Hydra

By Carsten Ahrens

Fortunately our freshwater streams and lakes are not inhabited by that terror of marine waters, the devilfish. However, we do have its minute counterpart in the freshwater hydra. Happily it is very small, less than an inch in length, or it would be much more widely known for its evil accomplishments.

The hydra belongs to that group of animals that include the jellyfishes, corals, Portuguese man-of-war, and the sea anemones. Most of its relatives are strictly marine, but the hydra is found only in fresh water.

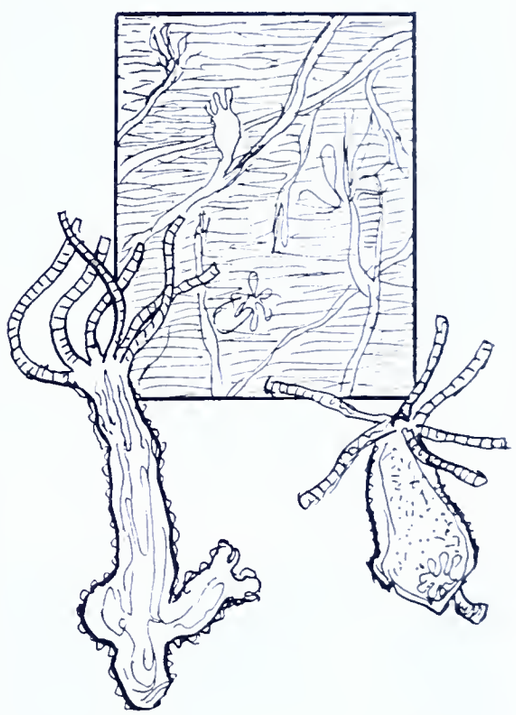
It is an animal with a peculiar structure. It is composed of two layers of cells with a stratum of non-cellular material between. Usually it is attached basally, and its arm-like body stretches out in every direction. At the anterior end, there is a mouth that is surrounded by a number of finger-like projections or tentacles. These tentacles are restless, constantly exploring the water around themselves. Each tentacle has a number of poison cells. Should a water flea or a newly hatched trout become surrounded by the tentacles, the poison cells would quickly paralyze the prisoner.

Once the victim is motionless, the tentacles work the inert form through the elastic mouth and into the pouch below. There, body juices digest whatever is digestible; the unused part is pushed out through the same opening through which it entered. The hydra is so primitive that it doesn't have a complete digestive tract; one opening serves as both mouth and anus.

The hydra is not anchored permanently. It stays in one vicinity until it has captured everything it can reach, paralyze, and swallow. Then it unfastens its posterior sucker and wriggles to another anchorage. It appears that the creature must be attached, however, before it can capture and digest food.

Reproduction in the hydra is rarely sexual. Usually a bud forms on the side of the hydra near the base. This swelling grows and gradually becomes a minute replica of its parent. Ultimately it breaks free and develops into another hydra. This asexual form of reproduction is called budding.

In the *Journal* of the American Museum of Natural History E. M. Hudger tells of an interesting experience with hydra in a fish hatchery. A sudden epidemic occurred among the trout fry. Examination showed that the



hatching troughs were divided into three compartments and that the greatest mortality occurred in that division into which the most water entered. It was somewhat less in the middle division and negligible in the last. The water supply was found to be pure, free from sediment, and of the proper temperature. The offending section was away from the light. When a powerful beam of light was shot into the section, "the culprits were discovered—great numbers of white and transparent hydras. They covered the walls of the trough. They were so colorless that in the somewhat twilighted interior of the hatchery they were invisible."

Here in Pennsylvania two hydra are common. The Green Hydra has the appearance of a tiny green octopus. It can be found in permanent water that is crowded with eelgrass and other water vegetation. This hydra is small, hardly a half inch long.

The Brown Hydra is larger than its green cousin. It stretches out occasionally until it exceeds an inch in length. It inhabits leaf-bottomed woodland pools and the quieter parts of reedy streams.

FISH AND WHERE TO FIND THEM

(From Page 9)

have about three-quarters of an hour of fishing before darkness settles over the hills. At this time of day there is no sun to cast a shadow, and the fisherman is able to blend in with the surrounding landscape. Another fact of great importance, is that the fish are feeding. The first pool is located in a sharp L turn of the stream. Right at the angle of the turn, a large, flat, overhanging rock, offers a cozy hiding place for many a nice, native trout that always seems eager to strike at dusk. The next pool is a jinx for me. Alders completely overlap the deep, swift hole at the base of a stone wall. Submerged sticks, alder stems, and rocks, provide ample cover and escape for the brookies. Usually I receive a strike, and the smart trout promptly entangles the line around some obstacle and escapes. In the process of freeing my hook from the underwater jungle, I either break my leader or create such a disturbance that no one could catch the dwellers of that pool on that particular evening. Once in a great while I am able to take one of those tricky fellows.

The third pool is long, wide, and shallow. The trout live here in the overhanging bank because a gush of pure, clear, cold water from a huge spring, pours into the pool from the west edge. A long, careful cast usually results in a strike.

The prize hole comes next. It is formed by a log and dirt jam and is wide and deep. A large underwater rock in the center, provides a hide-away. A swift rapid whirls the water into the pool. It is best to cast so that the current carries the lure into the center of the pool and then one must be alert, for if one is careful and lands the first trout without too much disturbance, he may catch a second and third. Also, one may get a ten or twelve-incher from this pool.

The next pool is a maze of roots of a long-gone hemlock. More hooks can easily be lost here, but a well-placed bait will usually bring results. By this time the end of the pasture has been reached. Three, maybe six, trout ranging from seven to perhaps as long as twelve inches, have been caught. Night has descended. The stream tumbles into the dark, spooky-looking wood. You give a little shudder and are glad you are not going to fish the stream in such foreboding surroundings.

Rains will enhance the angler's luck in small streams for several reasons. One, trout are more likely to be feeding during freshets as an abundance of feed is being washed down stream. Two, the water is murky or cloudy, and this helps to conceal the angler. Three, the stream has more current and will carry the line to likely-looking spots where it would be impossible to reach when the brook was low.

I clearly remember one mid-May Sunday morning when the clouds began to disperse after several days' warm rain. The fish bug bit me as I thought of one of my hidden streams. Gathering my gear, I proceeded a few miles where I left my car at a good parking place. I first had to cross a rather large brook, and as there were no bridges and as the brook was roaring high, this gave me some difficulty until I found a small, yellow birch log that barely spanned the rushing waters. After a precarious crossing on this shaky bridge and a lucky jump, I reached the far bank. Leaving the large creek, I followed an old logging road through the spring-wakened forest. Jack-in-the-pulpit reminded me that this was Sunday, and Jack's sermon inspired me more than that of many a learned preacher to whom I have listened. Grouse were drumming, and the newly-arrived warblers made a merry chorus after the long rain. The woods smelled fragrant to my nostrils as I trod the dripping woodland path to the wood thrush's liquid song. The woods ran into an abandoned orchard long overgrown, but the apple trees that had managed to survive the inroads of their wild forest cousins, were in full bloom and added their fragrance to the sweet forest odors. At the edge of the orchard the stream that I sought flowed. Today it almost roared as it rushed to join the larger stream.

I reached the stream about a half mile above where it joined the larger brook and immediately started to fish up-stream with worms. The first few pools yielded nothing, and I began to give up hope; however, I soon began to receive strikes and three keepers were hooked. I switched to a black gnat as I entered fairly open pasture and clearer water, and two eight-inchers were caught. It seemed that every pool contained trout. As I stopped to replace the dry fly with a Mickey Finn streamer because of the difficulty in dry fly casting in the brushy stream, I heard a noise on the farther bank and a frisky, gray squirrel scampered down the bank and I hurried across a down log on which I was standing. He came to a sudden stop within a yard of my feet. He carefully scrutinized me and as my foot slipped a trifle he rushed back up the bank.

I cast from the side of the next pool with the Mickey Finn and had a strike immediately from under the roots of an old stump, but the trout was wise and soon had my leader twisted around the submerged roots deep under the bank. Needless to say, I lost both fly



G. T. Curry of Emporium and a real good brown trout he coaxed into taking a minnow April 30 near Water Tower at Huntley. The fish measured 27¼ inches and weighed 5 pounds, 12 ounces cleaned.



The two veterans shown stocking trout in Pohopoco Creek, known as Big Creek in Carbon County are Margaret M. Oracko, a registered nurse who spent two years of the recent war aboard the hospital ship Francis Y. Slanger and Stephen F. Oracko who served with the armed services in the Philippines and is at present a junior at the University of Notre Dame, where he is a specialist kicker on their famous football team.

and fish. As I selected another fly, I remembered my bushy-tailed visitor of a few minutes ago and tied on a silky, gray streamer composed of squirrel hair. The premonition of the selection was correct for I caught three keepers in the next four pools.

I had ascended the stream as far as I desired and switching to worm and spinner, I started to fish downstream. Within too short a time I had caught two more trout, and my limit was complete.

Let's not overlook the little things in life. Dynamite is small but it packs an awful wallop. Diamonds are small but they are one of our most costly gems. Streams may be small but in them you may find the greatest of enjoyment.

Costley Appointed Supervisor for Allegheny National Forest

Richard J. Costley will be appointed as the new Supervisor for the Allegheny National Forest in Northwestern Pennsylvania, it was announced recently by Regional Forester R. M. Evans.

Mr. Costley will succeed Forest Supervisor Alfred H. Anderson, who is transferring to a similar position on the Monongahela National Forest in West Virginia. The transfer will take place July 1.

Both the Allegheny and the Monongahela National Forests are primarily watershed protection areas, affecting various drainages including the headwaters of the Allegheny and Monongahela Rivers which join at Pittsburgh to form the Ohio River.

Selection of Supervisor Costley to administer the Allegheny National Forest emphasizes the importance of the game and fish management work on that forest. The Allegheny forest embraces some 467,000 acres of federally owned land in Forest, McKean, Elk and Warren counties considered to be among the best hunting and fishing areas in the State. Appointment of Costley, who has done special work in these fields, will be of interest to the many sportsmen in Pennsylvania and nearby states.

In the multiple-use administration of the Allegheny forest, Costley's other duties will include watershed management, the continued development of the forest as a timber growing area after the severe cutting and fires it suffered early in the century, and the development of its rapidly expanding use as a recreational area for Northwestern Pennsylvania, Southwestern New York, parts of the West Virginia Panhandle, and Eastern Ohio.

Crawfish have a nasty habit of backing under rocks the minute they get to the bottom of a stream or pond. You can use a float to keep the bait off the bottom, or you can keep the bait in constant motion by manipulation of the rod and line.

"Dear Editor . . ."

They Catch Walleyes Too

Norristown, Pa.

Dear Editor:

After reading and enjoying the August 1948 issue of the PENNSYLVANIA ANGLER, especially the story entitled "The Walleye Widow" I thought I would submit a snapshot and information on a Walleye I caught last July 14th.

We visited friends who were spending their vacation at Singer's Landing, along the Wallenpaupack, about 5 miles from Hawley. About 9 o'clock in the evening we started



Mr. Montgomery looks pleased.

out to try our luck. My friend had a fly rod and I had a casting rod and we were using night crawlers for bait.

We were fishing in about 25 foot of water, rocky bottom, for about ¼ hour when the Walleye struck. He really put up a fight and it took about 15 minutes to land him. He measured 30" in length and weighed 10 lbs.

Very truly yours,
James Montgomery

Walleyed pike are so cannibalistic that even when in the fry stage they have been observed forming a string five or six inches long, each seeking to swallow the one ahead of it to the extent of taking the tail of the other small fish in its mouth.

Apparent Good Faith—He Says

3609 N. 21st St.,
Philadelphia 40, Pa.

Dear Mr. Editor:

In view of the fact that the trout stream mileage is not sufficient to accommodate all fisermen at one time on the opening day, with any semblance of order, don't you think it would be a fine thing if the Fish Commission would establish preferential turns for privilege of casting on that great day, not to exceed an hour at a stretch for any one person, until the crowd thins out.

To simplify this procedure, tickets could be issued in sequence of date of license. Doubling the fee for all over 21 and under 71 would solve the problem of additional patrol expense to insure equitable justice. Fishermen under 21 and over 71 should be prepared to exhibit, upon request, an authenticated birth certificate in lieu of a license!

Furthermore, would it not be well to enact a law limiting the length of cast on small streams to eliminate the vexatious experience of fouled lines by opposite bank fishermen? Such offenders should be made to retire to the side-line for a priod of meditation.

It will be almost a year until another opening season is upon us, granting the date is not changed, so there will be ample time to do something constructive about these desired regulations.

Yours in the accepted "old age" class; and in apparent good faith.

Very truly,
Roland L. Howe.

THANK YOU Mrs. Burns

Susquehanna, Pa.
R. D. No. 3

Dear Sir:

I am writing to let you know how much we enjoy your fine magazine.

My husband, myself and our two little daughters, 9 and 11 all enjoy it very much as we are all fond of fishing. The first two days of trout season my husband and eleven year old daughter spent fishing Starucca Creek and brought home a very nice catch each day, of brown, brookie and rainbow.

I intend to get in some angling too and we may send some snapshots of our catch.

Keep up the good work and here's wishing you much success with this fine outdoor magazine.

Sincerely,
Mrs. Andrew Burns and family.

One Less for Rod and Line

Three North Side sportsmen saw a big pike devour a nine-inch trout in one gulp, while stocking trout in the Nescopeck Creek.

Casper Poltrock, Jr., and Tom Palko had just emptied their can of trout into the creek when the pike, measuring about 30 inches in length, darted in front of them in the water.

It lunged at the trout, spun it around and then swallowed it in one quick movement.

Pennsylvania Fish Law Violations

Cases Settled During the Month of April 1949

Allegheny County

Nagy, Alex., Jr., 176 Marsden St., Pittsburgh 7, Pa. Two minnows over limit ..... $ 20.00

Newring, Curtis N., 20 Whiteside St., Pittsburgh, Pa. Exceeding creel limit 10.00

Beaver County

Cheran, John, 1240 Ridge Rd., Ambridge, Pa. Three trout over limit 30.00

Evanson, Steve, Box 304, Koppel, Pa. Fishing without a license 25.00

Paul, Peter, Jr., 147 Linmar Plc., Aliquippa, Pa. Three trout over limit 30.00

Stettler, Robert E., 1307 Merchant St., Ambridge, Pa. One illegal brook trout 10.00

Swan, James, R. D. 3, Aliquippa, Pa. Three trout over limit 30.00

Bedford County

Haubrick, Marvin, R. D., Saxton, Pa. Fishing without a license 25.00

Manges, Walter M., Buffalo Mills, Pa. Trout in closed season 20.00

Mooney, Paul, R. D. 1, Buffalo Mills, Pa. Fishing without a license 25.00

Musser, Harry, Sr., Six Mile Run, Pa. Taking game fish with illegal devices 20.00

Blair County

Biesecker, Don, 1507 Fifth St., Altoona, Pa. Killing more than two fish in a restricted area 20.00

Gebhardt, Paul E., 613 16th St., Altoona, Pa. Killing more than two fish in a restricted area 20.00

Bradford County

Calkins, Layton, Troy, Pa. Fishing in a stream April 14 after 5 P.M. 20.00

Butler County

Lucas, Wm. James, 224½ N. Main St., Butler, Pa. Fishing without a license 25.00

Treser, Ralph D., R. F. D. 2, Butler, Pa. Using hands to secure sucker 40.00

Cambria County

Gilles, Andy, 227 Main St., Conemaugh, Pa. One trout in possession in closed season 10.00

Gilles, John, 344 Greeve St., Conemaugh, Pa. One trout in possession in closed season 10.00

Matthews, Anthony, R. D. 1, Fallen Timber, Pa. Fishing on penitentiary property prior to the time when fishing is permitted 20.00

Naugle, William E., 351 Greew St., Conemaugh, Pa. One trout in possession in closed season 10.00

Peight, David J., 1544 Grant Ave., Altoona, Pa. Violating rules and regulations of the commission 20.00

Centre County

Matherbaugh, Chas. E., R. D. 1, Box 243A, Bellefonte, Pa. Fishing on penitentiary property prior to the time when fishing is permitted ... 20.00

Weaver, Sherman K., R. D., Woody Crest, State College, Pa. Fishing on penitentiary property prior to the time when fishing is permitted 20.00

Chester County

White, Dalton, 11 N. Matlock St., West Chester, Pa. Eleven trout out of season 110.00

Clearfield County

Baxter, Robert, Brisbin, Pa. Killing more than two fish in a restricted area 20.00

Johns, Raymond, Madera, Pa. One brook trout less than six inches .. 10.00

Clinton County

Bathurst, Gaylord A., 31 S. Grove St., Lock Haven, Pa. Seven brook trout less than six inches 70.00

Helbley, Joseph F., R. D. 1, Lock Haven, Pa. Exceeding creel limit.. 10.00

Krape, Daniel, Antesforte, Pa. Two trout less than six inches 20.00

Stiner, George F., 243 5th St., Renovo, Pa. Violating rules and regulations of the Commission 20.00

Columbia County

Melucci, Alex, R. D. 5, Bloomsburg, Pa. One trout in closed season ... 10.00

Interference with officers 100.00

Crawford County

Loomis, Minnie F., R. F. D. 2, Cambridge Springs, Pa. Fishing without a license 25.00

Shetler, John, R. D. 1, Jamestown, Pa. Fishing without a license 25.00

Using illegal device for taking fish 20.00

Cumberland County

Tritt, Dale, R. D., Carlisle, Pa. Taking suckers with burr hook 20.00

Dauphin County

Hargan, Harry E., 1924 Fulton St., Harrisburg, Pa. Two brook trout under six inches 20.00

Hendricks, Leroy, Port Trevorton, Pa. One trout under six inches .. 10.00

Reed, Charles W., 1928 Fulton St., Harrisburg, Pa. One trout under six inches 10.00

Walter, Milton, 758 Main St., Bressler, Pa. Fishing without a license 25.00

Delaware County

Baxter, James F., 315 S. Monroe St., Media, Pa. Shooting game fish with a rifle 20.00

Smedley, Alfred B., 215 Valley View, Media, Pa. Shooting game fish with a rifle 20.00

Elk County

Davies, Arden E., 215 Cushing Ave., Johnsonburg, Pa. One trout less than six inches 10.00

Gardner, Harold R., Kersey, Pa. One brown trout in closed season 10.00

Fayette County

Beckett, Andrew J., 511 Connellsville St., Uniontown, Pa. Fishing without a license 25.00

Huntingdon County

Hoffman, Delwin F., Saltillo, Pa. One pickerel in closed season 10.00

Huling, Williard J., Petersburg, Pa. Twenty-three undersized brook trout 230.00

Pyles, Warren R., Star Route, Shade Gap, Pa. Six trout in closed season 60.00

Indiana County

Leysock, Andy, Lucerne Mines, Pa. Two trout over creel limit 20.00

Jefferson County

Olson, Donald P., Summerville, Pa. Accomplice in using explosives 100.00

Orris, Albert C., R. D. 1, Sigel, Pa. Seven trout in closed season 70.00

Snyder, Paul E., R. D. 2, Reynoldsville, Pa. Using illegal devices 20.00

Lackawanna County

Fofi, Nello, 103 Clarkson Ave., Jessup, Pa. Eight trout in closed season .. 80.00

Kornish, Wilbur A., 1928 S. Webster Ave., Scranton, Pa. Fishing without a license 25.00

Altered fishing license 25.00

Maslar, John, 864 East Scott St., Olyphant, Pa. Not having fishing rods under control 20.00

Truempy, Theodore, 1717 Sanderson Ave., Scranton, Pa. One pike in closed season 10.00

Lancaster County

Yost, Clarence, R. D. 1, Conestoga, Pa. One trout out of season 10.00

Lehigh County

Walk, Sterling, 233 S. 14th St., Allentown, Pa. Using illegal devices ... 20.00

Exceeding creel limit 20.00

Game fish out of season 10.00

Luzerne County

Fedorchak, Michael, 56 Spruce St., Alden, Pa. One pike during closed season 10.00

Garey, Joseph, 59 McCollouch Rd., Plainsville, Pa. One trout in closed season 10.00

Lycoming County

Bowen, Donald G., Williamsport, Pa. Exceeding creel limit 30.00

Gibson, John T., R. D. 2, Williamsport, Pa. Exceeding creel limit ... 40.00

Koons, Samuel C., R. D. 1, Nesbit, Pa. Exceeding creel limit 10.00

Lowmiller, Kenneth L., R. D. 2, Williamsport, Pa. Exceeding creel limit 40.00

McKean County

DeSantis, Adolph, 12 Euclid Ave., Bradford, Pa. One trout less than six inches 10.00

Gardner, William C., Box 31, Port Allegheny, Pa. One trout less than six inches 10.00

Himes, Lawrence, Hazelhurst, Pa. Fishing without a license 25.00

Johnston, Richard C., R. D. 1, Bradford, Pa. Twelve trout less than six inches 120.00

Thirteen trout over the creel limit 130.00

Knight, Norris E., 638 E. Main St., Bradford, Pa. Five trout less than six inches 50.00

Mealy, Duane E., R. D. 3, Bradford, Pa. Nine trout less than six inches 90.00

Three trout over the creel limit .. 30.00

Timblin, Theodore, Smethport, Pa. Fishing during closed season 20.00

Van Gorder, Harold B., R. D. 2, Smethport, Pa. Four trout over creel limit 40.00

Mercer County

Patton, Ernest L., Sandy Lake, Pa. Exceeding bait fish limit 50.00

Mifflin County
Cossack, George P., 603 W. 4th St., Lewistown, Pa. Fishing while license was revoked 25.00
Weiler, Bruce, Logan St., Reedsville, Pa. Using illegal device 20.00

Montgomery County
Alderfer, Mrs. Price, R. F. 4, Pottstown, Pa. Fishing without a license 25.00
Green, William A., 2230 Brynmawr Ave., Ardmore, Pa. Giving false information in securing a resident license for a non-resident 25.00

Philadelphia County
Cardamone, Peter L., 102 East Walnut Lane, Philadelphia, Pa. Fishing without a license 25.00

Pike County
Snyder, Henry, Dingmans Ferry, Pa. Exceeding baitfish limit 100.00

Somerset County
Ansell, John T., R. D. 6, Somerset, Pa. One trout in closed season .. 10.00
Fishing during closed hours and having one bait fish in possession 10.00
Gindlesperger, Russell H., Hooversville Pa. One trout in closed season 10.00
Miller, James A., Box 8061, Boswell, Pa. Fishing without a license 25.00
Steckman, James, Jr., R. D. 3, Stoyestown, Pa. Fishing without a license 25.00

Schuylkill County
Writz, John, 724 E. Center St., Mahanoy City, Pa. Fishing while waters were drawn down 20.00

Tioga County
Morley, Harold E., Morris Run, Pa. Fishing in trout stream April 14th after 5 p. m. 20.00

Venango County
Smerker, James, Route 2, Oil City, Pa. One trout out of season 10.00

Washington County
Behringer, Harold, 471 N. Franklin St., Washington, Pa. Exceeding creel limit 10.00
Burnell, John J., Venetia, Pa. Fishing without license 25.00
Lenco, John G., 278 Franklin Ave., Washington, Pa. Using bait in restricted area 20.00
Vavrick, Steve L., 446 Park St., California, Pa. Fishing without a license 25.00

Wayne County
Pfund, Gustave, R. D. 1, Honesdale, Pa. One trout in closed season .. 10.00

Westmoreland County
Bellas, August, Jr., 1172 2nd Ave., New Kensington, Pa. Five trout in closed season 50.00
Cherney, Homer E., Box 151, Acme, Pa. Exceeding creel limit 10.00
Kuntz, Mrs. Richard, South Railroad St., Manor, Pa. Fishing without a license 25.00

Wyoming County
Corby, Floyd, Jr., R. D. 5, Tunkhannock, Pa. Snag-fishing or foul hooking game fish 20.00

York County
Hodson, Delbert W., 224 W. Market St., York, Pa. Fishing without a license 25.00
Noll, Richard, 352 Main St., Dallastown, Pa. Lending a fishing license 25.00

Out of State
Conlon, Thomas F., 208 Schenley St., Cumberland, Md. Operating a motor boat without a license 20.00
Nelson, H. L., R. F. D. 3, Cumberland, Md. One trout in closed season .. 20.00
Crowl, Clinton H., R. D. 2, Taneytown, Md. Fishing without a license 25.00
Foster, Pell W., III, 171 Chestnut St., Englewood, N. J. Exceeding creel limit 40.00
Herbold, Richard, 850 S. 13th St., Newark, N. J. Fishing without a license 25.00
Huff, Earl, Newton, N. J. Placing quarter inch mesh wire and frame across stream preventing migration of fish 100.00
Essington, Fred E., 133 E. Park Ave., Pleasantville, N. J. Fishing without a license 25.00
Barney, William J., R. D. 1, Corning, N. Y. One trout less than six inches 10.00
Wykoff, Arcalous W., 1814 W. Water St., Elmira, N. Y. Three trout less than six inches 30.00
Cartos, James W., 912 Chemung St., Horseheads, N. Y. Three trout less than six inches 30.00
Dunham, Harold R., 110 W. Spring St., Olean, N. Y. One trout less than six inches 10.00
Tenney, Charles T., Rock Tavern, N. Y. Exceeding creel limit 20.00
May, Robert, 734 Mae St., Kent, Ohio. Fishing without a license .. 25.00
Beenson, Jack, 301 N. Zane St., Martins Ferry, Ohio. Fishing without a license 25.00

New Trolling Line

A new type of trolling line—with lengths permanently marked on it—was put on the market this Spring.

Following exhaustive tests at Lake Pend Oreille, Idaho, this past season, the Weber Lifelike Fly Company of Stevens Point, Wisconsin, will market a Du Pont nylon monofilament trolling line which will be marked alternately every hundred feet with blue, yellow, and green dye. The line, to be sold under the name of "So-Deep," will be made in a continuous length of 600 feet.

The markings, which will be dyed into the nylon line, will save the angler the task of measuring his own line or guessing how much he has out behind the boat while trolling. Heretofore fishermen have had to do their own measuring or marking—an unsatisfactory process because accurate measurement is difficult and home-made markers such as fingernail polish tend to wear off.

Nylon monofilament trolling lines are translucent and almost invisible in the water. They run freely through the rod guides and will not kink. Probably their outstanding advantage in the eyes of fishermen is the lessened water friction which enables the angler to reduce the weight of the sinker by 50 per cent and still troll at effective depths.

Notes On Using Minnows

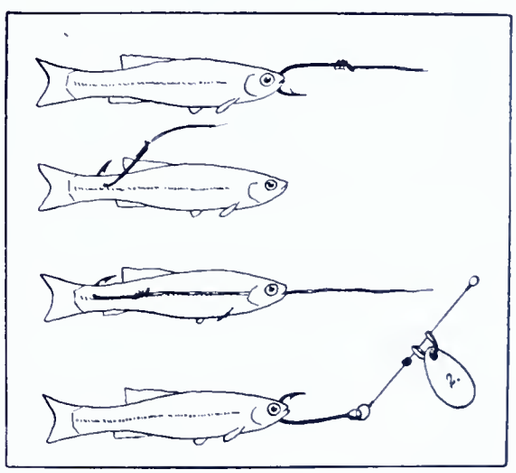
By Don Shiner

Among the numerous ways of attaching minnows to a hook only a small percentage of the methods will do the required work.

For still fishing either hooking the minnow lightly under the skin behind the dorsel fin, or through both lips, will allow the minnow to remain alive and active. If the hook is imbedded too deeply in the flesh behind the dorsel fin, the hook will break the tiny vertebrae and paralyze the minnow. Likewise, unless the minnow is hooked through both lips, the minnow will quickly drown.

These two methods are best when still fishing with minnows in lakes, ponds and streams. However, to cast minnows to likely game fish quarters and quickly retrieving them, calls for a different way of hooking minnows or the minnow will be torn from the hook during the cast. One excellent method of hooking minnows for casting with bait, fly or spinning rod is by inserting the hook through the mouth, out the gill and imbedding the hook in the flesh of the tail. The minnow will then stand a considerable amount of tossing around.

A long shank hook can be placed through the mouth and gill and hooked in the tail in the above manner when used behind a spinner. Or the hook can be placed through the head when attaching to a spinner. Both invariably kill the minnow in a short time, but this is of small importance when the bait is cast and retrieved.



Casting and retrieving the minnow alone or in conjunction with a spinner is an excellent way of using minnows which have died while in your possession. They are just as effective this way and reduces the amount of minnows required for a day's outing. Being conservative with the bait fish in our streams not only allows the game fish to have more feed, but also more anglers to obtain a few bait fish without hurting the supply too much.

Minnows are excellent bait for all game fish since the majority are cannibalistic. However, use the minnow to the best advantage and be conservative with their use rather than wasteful.

Net 'em, Nick 'em and Put 'em Back

By Joe Curt

It is strange how little incidents change one's prospective and gives the fisherman an entirely different slant on his outdoor hobbies.

We all get a thrill in re-living out bygone experiences and I have had many interesting incidents in my fifty odd years of trout fishing—mostly in the Pocono Mountains.

In the early days there were plenty of trout, we had no autos or good roads, and it was either the horse and buggy or the train. It took much longer to get to your destination than to catch a mess of nice trout and most of them were plump, good size brookies and to me the brookie is the king of 'em all for he is a real American.

One trip I remember was back in 1905 when four friends and myself spent four days trout fishing in Pike County on the Shohola Creek, the legal limit then was forty trout and we caught over six hundred. Were any of us ashamed of that kill? Of course not for we were after trout and we could have legally taken eight hundred in our four day stay.

Have thought of that trip many times and am still ashamed of that record, but have since learned that meat is not the most important part of a fishing trip and the older I get the less I desire to kill.

No one loves trout fishing or gets a greater kick out of it than I do, but we have to do a little clear thinking if we are to preserve our sport and continue to enjoy it.

The sight one sees along a pretty mountain stream, the smell of the woods and the clean air, to see the kingfisher dive for his dinner, hear a grouse drum nearby, or have a squirrel appear and scold you for encroaching on his domain.

One amusing incident happened while my doctor friend and I were eating our lunch alongside of a beautiful pool about 25 feet across, the kind of a pool that you just knew harbored a good trout, on the opposite side of the pool on a large rock that slanted into the pool a frog sat, the doctor mentioned he was just the bait to take a good trout. We kept watching and talking about brother frog when he finally hopped off the rock into the water, doctor said if he gets out far enough he's sure a goner and to be obstinate I bet him a cigar that he would cross the pool safely, well, he would give a dozen kicks and then rest, and if ever a frog tried to commit suicide he did for we were both far enough away from the pool and motionless for a fish to take him.

To our astonishment that frog finally crossed the pool, climbed up on the bank and sat there with his back to us.

We talked about that frog all the way home and many times since, and the payoff was that about a week after this incident doctor took a seventeen inch brownie out of that same pool.

An experience happened to me about ten years ago that has since shown me how to get more fun and satisfaction in my trout fishing and I pass it on with the hope that every fisherman will try it and prove my plans pays off.

I had fished this little stream for many years within a half hour drive from my home in Scranton and it produced the most vivid colored and plump natives that would run from 7 to 8 inches. One evening while resting and smoking at a deserted beaver dam I chanced to glance up stream and saw a good fish jump for an insect, it brought me to life instantly as he was the biggest trout I had ever seen on that stream. I stalked up to the pool that had an old stump on the opposite side and plenty of sunken sticks to play a fish through, it was a tricky place to land your fish when hooked.

After waiting for a few minutes I sailed my fly over near the stump and how that trout did smack at it, we had quite a batttle but finally steered him around and through the sticks and netted him.

He sure was a beautiful fish, 15 inches, such gorgeous coloring and plump, the biggest native I ever saw in that stream, I was about to put him in my creel when the thought struck me he was too beautiful to kill, when it occurred to me why not mark him and put him back, so I laid his tail on the heel of my boot and cut out a V and tossed him back. It just seemed to me on the way back to my car that the woods and the world never looked better! I had made a discovery. You can have fun and not kill.

About a week later I decided to try for that beaver dam native again, but after a couple of casts gave up and figured he was too foxy.

The next week I tried him again and connected and we had our battle all over, and what a thrill when I saw the nick in his tail, I threw him back again.

The last day of the season I decided to see old "beaver dam" and give him another try. I figured he would be foxier than before, but after sitting still for some little time I make a cast and he connected, same old battle and the nicked tail. I admired him for as long as I dared keep him out of water and put him back and wished him a safe and easy winter.

Have caught many trout since the beaver dam native and it's a habit now to nick their tails and put 'em back and see if I can fool them again.

You may think you are pretty good with a fly but try catching the same trout again and discover the thrill of seeing your trade mark.

Keep a few to take home of course, but fish for fun and not meat.

There is no fun in a dead fish, take an old timer's word for it.

Net 'em. Nick 'em and put 'em back.



J. Nicklas, Call-Chronicle Photo

Gerald Murphy of Hokendauqua and Thomas Quigg of Catasauqua with a notable catch of brown trout from Lake Wallenpaupack. The score, Murphy: 1 trout, 21½ inches, 3 lbs., and one 22½ inches, 3¼ lbs. Quigg: 3 trout, 22¾ inches, 3¾ lbs., 25½ inches, 4¾ lbs. and 27 inches, 5½ lbs.

The official closing date of the Spring Creek Project, "Fishermen's Paradise" has been announced as July 23rd.

Some Plants Aid Ducks and Fish

Many of the same plants which are important food plants for waterfowl also are important food and cover plants for game fish.

Plant life plays a very important part in the purification of waters by taking up the poisonous carbon dioxide gases given off by soil decomposition which asphyxiate fish life, and sending forth in its place the oxygen into waters which is so essential to fish life.

These plants also support countless numbers of minute animal life upon which the young fry are dependent for their food. They also provide excellent shelter and hiding places for the younger fish to escape from the larger ones which are of a cannibalistic nature.

Food, protection, and better living conditions for the smaller fish mean that more will grow to maturity—and thus more fish, larger fish, healthier fish, and better fishing.

Aquatic vegetation also assists in the clarification of the water. It binds the soils and prevents turbid water. It also collects floating particles of sediment. It shades the underwaters, keeping them cool, and also provides better spawning beds.

In order that there will be a plentiful supply of fish in any water, it is first necessary to protect the small fry. They cannot feed upon the larger insects or upon one another, as the large fish do, and as a result in waters barren of vegetation millions of the smaller fish perish.

On April 15th

He routs me out at four o'clock,
Before the light of day.
I must hurry and rustle breakfast,
He's got to be on his way.
Lunch, fishpoles and tackle are packed,
And he pulls his hip boots on.
Now all is ready and he is off,
In the first gray light of dawn.
Come all you wives of fishermen,
Let's give a hearty cheer.
And thank our stars that opening day,
Comes only once a year.

Anna Belle Burns

Lakes of North-East Pennsylvania

By Joseph A. Yanchik

Lake Carey

There are definite reasons why Lake Carey is regarded as a fine lake. One of them is the excellent fishing, but there are other reasons why you should visit it when you get the opportunity. Nestled in one of the verdant Wyoming County valleys this lake is fished by thousands, every season. Approximately 32 miles from Wilkes-Barre you can reach it by traversing the scenic Sullivan Trail via West Falls on the west bank of the Susquehanna then driving over the bridge at that point to the east side of the river. The highway elevates at this point and you are welcome to view the grandest scenery in Pennsylvania. The winding Susquehanna is at its prettiest at this point. It is quite wide, here, as it flows between patterns of lush and green fields in winding curves. Then you drive along the mountains on the right side of which are perpendicular masses of solid rock, remains of blasting, when the highway was being built. The highway is in good shape and you continue right into Tunkhannock, where you turn to your right at the light about mid-town. It is not very far to the lake from that point.

Another route to take from Wilkes-Barre is via the New Dallas highway. This cuts about six miles from the trip. This is a very scenic trip. It takes you through Tunkhannock, past the airport and the open air theatre nearby. The lake is not far.

Lake Carey is not very wide but it is very deep in its mid section. The lake is divided into two sections by a highway bridge under which you can float on your boat from one section to the other. Keep your head down when rowing under it. Each end of the lake is muddy and covered with lily pads and assorted weeds and scum. The center of the lake is deep and rocky in places. All species of fish inhabit this lake. Some giant turtles are caught here, especially in the shallow water under the weeds. Small sunfish and catfish in the shallow parts of the lake make it a trying day for the angler but often he is compensated with a thrilling moment by the kind of fish you like to read about. Last fall, for instance, a record Pike was caught at night by a lucky angler. I like to fish this lake at its extreme northern end. At this point the lily pads are thick and you can see their red stems in the clear water. Using live bait and fishing shallow with a bobber the perch come into action and they are a nice sizeable catch. Big blue gills seem to like the larvae of the dragon fly and when they are active the angler is indeed happy.

I caught a pike on this larvae one day that was of excellent size but this poor fish had half a jaw only and its one eye was missing. The hook was imbedded in the remaining part of the jaw and the fish put up quite a fight. If you want plenty of action, visit this lake around the middle of April when the perch are on the rampage. Warning; take plenty of worms.

The boats are in good shape and there are several docks at which they can be rented. Rental is $1.00 per boat irregardless of the number of passengers.

This lake has many pretty cottages and their lawns are beautifully kept. In the summertime the beauty of these gardens and their flowers are reflected in the water and they are, indeed, a sight to behold.

Although this lake does not seem very large it does become very rough and in its center the waves are pretty dangerous, especially when your boat has a shallow draft. Don't venture on it during a storm as it becomes pretty nasty.

There are several hotels on its shores where you can get meals at reasonable prices. Visit Lake Carey and you'll agree that it is worth the trip.

Incidentally, right off the boat house, as you enter the lake, is a rocky shelf which extends almost into the middle of the lake. Try fishing in front of that shelf. You will find that the water here is almost eighty feet deep and that some big babies lurk in its murkiness. And at night, when the water is calm, take your favorite plug or fly on the left of the bridge and the shallow water and you will find why bass like to feed in that section of the lake. Good fishing on a beautiful lake.

Lily Lake

By its name you can surmise why they call this lake "Lily." I fished this lake as a youngster and if I didn't go home with fish I was always sure to bring home a bunch of the most exquisitely perfumed lillies for mother's vase. In the heat of a summer's day, as your boat or canoe cuts through this myriad wonderland of nodding lillies, the perfume from their petals is breath taking and delightful. I do not know of any other lake which has so many lillies. They are white and are fringed on their petals with a pinkish tinge. I often have wished that more fishermen would learn to appreciate the beauty on a lake or around a lake instead of just concerning themselves with what's in the lake.

Lily Lake is not far from Glen Lyon and Nanticoke, Penna. It is not a very large lake. Its shore is fringed with many beautiful cottages and boat houses are also plentiful. The water, except for the center of the lake, is not very deep. At landings. the water is deeper but it is easy to get stuck on other shore lines where the water measures a few inches in depth. The solid shore line is a part of the rocky strata that surrounds the lake. As I mentioned before, many lillies, and the green pads with their long red stems, criss cross the lake where ever the dark soil lies in abundance. When the green panorama of the trees which surround the lake are blended with the sun light shimmering on the water and the lillies are in bloom, the lover of nature can appreciate a scene that is beautiful.

Piscatorially speaking, this lake has a nice variety of fish in its body. Last summer I caught several fine creels of fish, bass included, but my best catch was a large catfish which I caught right in the middle of some of the lily pads. Perch are plentiful. The usual schools of sunnies parade about your bait and get their share. Pickerel are not plentiful but run into reasonable sizes.

Boat rental is reasonable. $1.00 per day is the usual fee. Nice lake and fair fishing.



This view is typical of the scenery related to Horse Valley Run in Perry County, one of the State's many good trout streams. The photo was made by state fish warden C. V. Long.

Brady's Pond

This is a pond which the State took over several years ago in its expansion program and I predict that it will be a boom to fishing in this section of the Pocono Mountains. The wildness and the heavy woodness in which this lake lies makes it a tough place to get to. Therein lies the reason why after it becomes developed it will produce fishing to a king's taste. I fished Brady's Pond several times this year. Boats are few and one contemplating a trip there will find that it is better to take your own along. Fishing from the shore is hard for a boat fisherman and unless you are used to it, you better stay home. The terrain around this pond is tangled with brush, thorn berry bushes, hemlock, spruce and the long, green grass so common around ponds in our State. There aren't many open spaces to fish from shore and one has to be careful of his footing. There is a lot of dead wood, sticks, limbs and assorted hindrances in ones path and a false step means a dunking or a broken arm or leg. In this wilderness lies Brady's Pond. Years ago it held its share of some of the finest fishing and one still hears stories of some of the big fish that were caught there.

The road leading to this pond is a bumpetty one. In fact your best bet is to park away from the pond and walk to it for safety's sake. Contests have been held on this lake by various sportsmen to see who was the best bass fishermen. Although I never participated in them I heard that they were an outstanding success.

If the bass will grow large anywhere it ought to be at this pond. It has the space, the feed and the natural haunts for big bass. I caught some excellent perch off the shore, while the catties and blue gills gave me plenty of action, too. I can't say much for pickerel in this pond as the bass seemed to get to the live bait first. These bass are fat and delicious. They were of a fine size and fought like tigers. Let me assure you that somewhere in the blue waters of Brady's there is a prize bass, in fact a lot of them for some lucky angler. It isn't far from Wilkes-Barre to Brady's. Mighty good fishing.

White Deer Lake

On the way to Milford via the Wilson Dam; past Uncle Tom's Cabin and the gorgeous scenery of Lake Wallenpaupak, on the right of Tafton House and its brilliant neon signs of red, leads the trail to White Deer Lake. A bumpy road brings you to the shores around which are small cabins and a few large homes under some huge trees. The lake is small and is in Pike County. Tufts of wild grass grow over its heavily vegetated

shores and they rise and fall with the waves in perfect rhythm. Some of the large oak trees extend their multiple branches over the water for great distances. The water is not very deep and looks very murky. Fishing from the shore I caught about all of the species in the lake including a fine pickerel. Squirrels abound in the woods around the lake. They are large grey ones and their chattering among the acorns was annoying as well as entertaining. This lake contains beaver and I saw several of the swimming about near the small grassy islands which are in the lake.

The water is dark and the bottom is muddy. The color of the fish is definitely affected by the water. For example, the sun fish are not as brilliantly colored as in clearer lakes. The bass in this lake are fat and quite plentiful. Perch are of the hump-back species and are pretty big. Pickerel supply the best sport. This lake is excellent for fishing. I suppose its wildness accounts for its productivity of fish and the fact that few, if any boats are available.

This is also a state stocked lake. Go to White Deer Lake for good fishing as well as an opportunity to see beaver in their native habitat and also the stunning scenery with which nature graces this lake. Note: Be on your good behavior as every good sportsman should be and do not trespass upon the private property around this lake. The vacationists are very jealous of this lake and well that they should. There's big fish in those muddy waters.

"Is your boy friend broad-minded?"
"Yes, that's all he thinks of."

Always

Some of the easiest and quickest ways to get a stream posted, so that you and your friends can no longer fish it:

ALWAYS drive onto a field to park your car. When turning around always drive into the field, particularly when it is wet.

ALWAYS throw paper, bottles and cans where you park your car. If you don't make it look like a garbage dump, the next fellow can add to it.

ALWAYS park your car so you block the lane. Right in front of the bars leading into a lane makes an excellent place.

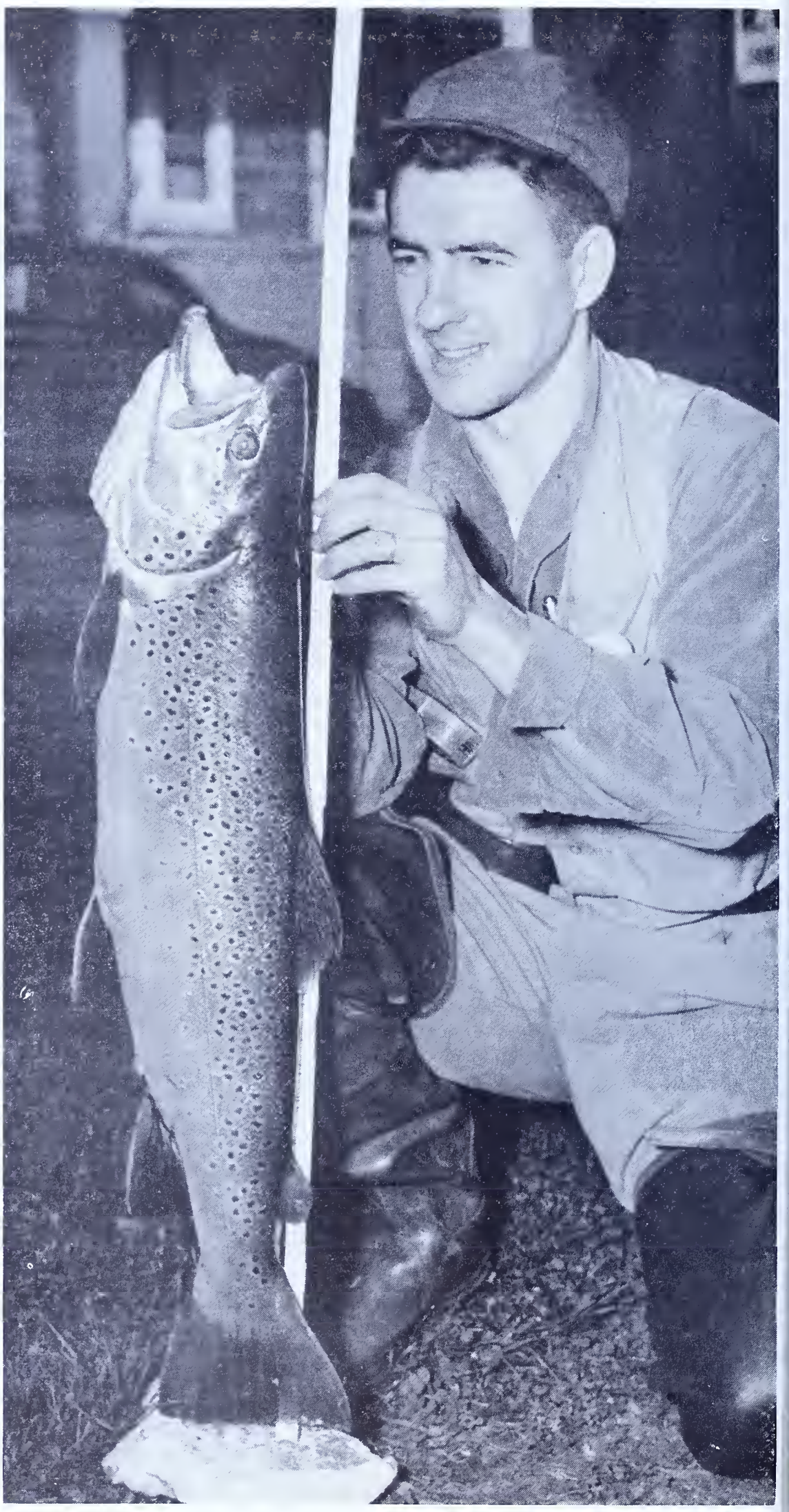
ALWAYS climb right up on a fence if you don't break it down no doubt, you will weaken it so the next fellow can. Never spread the strands to crawl through or under a fence. Let all gates and bars down.

ALWAYS walk through the fields seeded to crops or grass. Never down a lane or fence row.

ALWAYS build a fire whenever you feel like it and wherever you please.

ALWAYS cuss the land owner, better still threaten to take a poke at him, if he calls your attention to some careless act on your part.

ALWAYS remember once a stream is posted and you can no longer fish it, you are the fellow who has lost everything.



Harrisburg-Evening News Photo

Harold W. Fetrow of Mechanicsburg R. D. 4, displays what is believed to be the longest brown trout taken from Pennsylvania waters on hook and line, the fish measured 31¾ inches in length and weighed 10¼ pounds, the weight being light for the length. A brown trout taken several years ago from Big Springs in Cumberland County by Don Martin of Harrisburg was one inch shorter but weighed 5¼ pounds more. Mr. Fetrow's trout was taken from Silver Springs, Cumberland County which is approximately 8 miles west of Harrisburg. Pennsylvania still grows them big.

PENNSYLVANIA'S
ANTI-POLLUTION PROGRESS

Pollution Abatement Actually a Course of Self Preservation

The drive to abate pollution of the waterways in Pennsylvania is actually a course of self preservation for industry and for everybody.

Industry, like all living things, requires water to live. Clean water eliminated many problems in the operation of industry, just as it does for public water supplies where it reduces health hazards and makes treatment less costly.

If industry fails to treat its wastes before they are discharged to the stream the waters become shamefully polluted, requiring intense treatment before they can be used again for industrial and public water supply purposes.

Some industries, because of heavy pollution, are required to seek other sources of supply—an added expense. These supplies are obtained from wells through which ground waters are tapped.

It is known that in some areas the ground water supply is not inexhaustible. In fact there are instances where the demand is already equalling the supply. Yet, the demand, aside from that of the actual processing of materials in the course of manufacture, is constantly increasing because that source provides water of an even temperature, needed in the expanding use of high speed machinery and air conditioning.

It therefore, behooves industry to assure itself the fullest use of water from the streams. This can be done by treating wastes and returning the waters to the streams in a clean condition. This is what is required under the Clean Streams program of the Sanitary Water Board. It actually amounts to self preservation, for industry and for everybody.

Another Foreign Engineer to Study Pennsylvania's Methods

Through arrangements made by the Embassy of India in Washington, D. C., for the Indian Government, V. K. Paranjype, an engineer from India today began a two-month period of practical training with the Bureau of Engineering, Penna. Department of Health. He is specially interested in the treatment of industrial wastes.

Mr. Paranjype graduated as a sanitary engineer in India and is engaged by the Central Provinces and Berar Government which are sponsoring his educational course in this country. He went to Rutgers University, New Brunswick, N. J., two years ago where he took an advanced course and received his master's degree. When he requested a location to receive practical training before returning to India, William Rudolfs, of Rutgers University suggested the Penna. Health Dept. Bureau of Engineering because of the advances made in the great variety of industrial operations in waste treatment in this State.

Coal Operators Given Orders

Orders have been sent to three coal operators directing them to cease the discharge of any mine drainage of industrial wastes from their mining operations until they have received a permit from the Sanitary Water Board. They are reminded that opening or reopening of a mine without a permit is illegal.

The orders went to the following: Freebrook Corporation, Kittanning, deep mine operation along Cathcart Run in Mahoning Township, Armstrong Co.; James A. White Coal Co., Punxsutawney, deep mine operation along Clover Run, Caskill Township, Jefferson Co.; George Bobo Company, Grove City, stripping operation along Fox Run, Lake Township, Mercer Co.

Under the Clean Streams program a permit for the proposed discharge and disposal of industrial wastes and acid mine drainage must be obtained from the Sanitary Water Board approving the drainage plan.

Permits for 5 More Operators

In furtherance of the drive to abate pollution of the waterways from anthracite operations as a part of the Clean Streams program, the Sanitary Water Board has authorized the issuance of permits to five more coal operations for the construction of desilting systems. All the operations are located in the Susquehanna River basin and all the permits contain stipulations that the systems, all of which are silt ponds, must be in operation or or before specified dates.

Due to failure to comply with the orders of the Board to install a desilting system, the Board has issued a cease and desist order to the Dancott Coal Co., Shamokin. The order requires that abatement of the pollution from the operations, which is located on Shamokin Creek, must cease by February 15.

Authority Lays Additional Pipe

Approximately 20,241 feet of intercepting sewer is being constructed at a cost of about $350,000 along Muckinipates Creek by the Muckinipates Creek Authority, Delaware County, in furtherance of the Clean Streams program. The new construction will bring the total length of the intercepting sewer system of the Authority to about 25,447 feet of varying size sewers. With completion of the new sewer, Muckinipates Creek will become a clean stream. The Authority has submitted plans to the Sanitary Water Board for a sewage treatment works which will be located at Norwood near the confluence of Muckinipates Creek with Darby Creek.

The Authority comprises sections of Springfield, Upper Darby and Darby townships, Ridley Township; a section of Clifton Heights and the boroughs of Morton, Glenolden, Norwood and Folcroft.

Oil Refineries to Build Plants

Orders for construction of waste treatment systems by specified dates, have been issued to oil refineries by the Sanitary Water Board.

Pennzoil Refinery No. 2, Cornplanter Township, Venango Co., is ordered to construct an oil separator to treat oil-contaminated waste water being discharged to Oil Creek and to have it in operation on or before July 1, 1950. The company now has a separator which is said to be inadequate. The company is also ordered to comply with a previously issued order under which inadequate oil separator facilities shall be replaced on or before July 1, 1950 at its Rouseville refinery, which is also located on Oil Creek.

An order requiring the placing in operation of oil separators to treat the wastes being discharged to the Allegheny River on or before July 1, 1949, was issued to the Wolf's Head Oil Refining Co., Reno, Venango Co. It is stated that the oil contaminated waste waters are now being discharged directly to the river or through one of three inadequate oil separators.

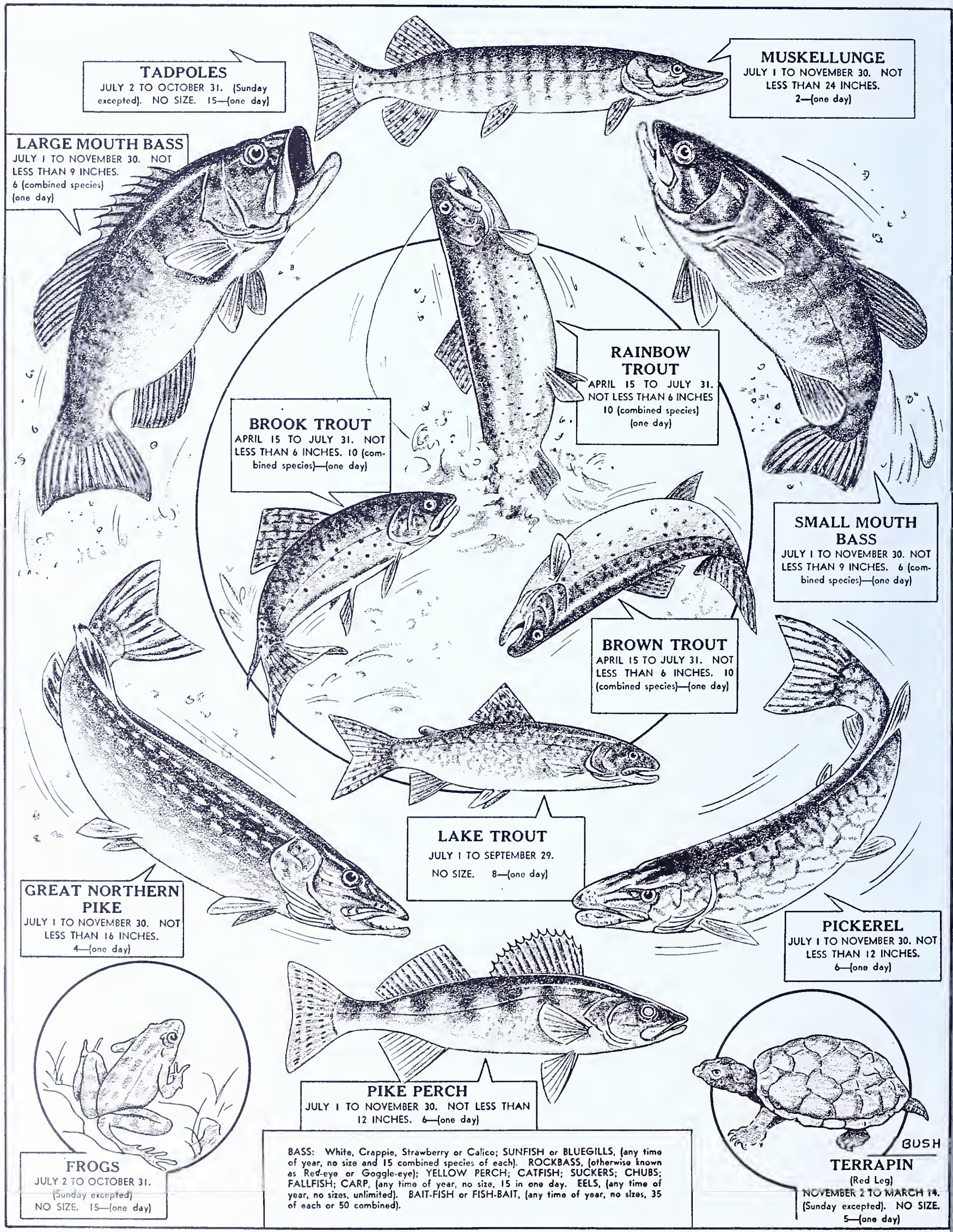
More Sewage Permits Authorized

Additional sewage permits have been authorized by the Sanitary Water Board under the Clean Streams program. They are as follows: South Williamsport, Lycoming Co., intercepting sewer and pump station; Loyalsock Township, Lycoming Co., intercepting sewer and pump station; Carlisle, Cumberland Co., sewer extension; Lock Haven, Clinton Co., sewage treatment works; Kane, McKean Co., two sewage treatment plants; Mt. Wolf, York Co., sewer system and sewage treatment works; Radnor Township, Delaware Co., sewer extension Warren State Hospital, Conewango Township, Warren Co., sewage treatment works.

The Board also authorized the issuance of permits to three additional industrial concerns approving plans for the construction of waste treatment systems to abate pollution of the streams. They are Peter J. Schweitzer, Inc., paper mill, Mt. Holly Springs, Cumberland Co., installation of system to reclaim fiber from water used in the process of manufacture; W. G. Keck, Inc., soft drink bottling works, Mt. Pleasant Twp., Westmoreland Co., facilities for chemical treatment of wastes, settling and filtration; Sylvan View Dairy, East Hempfield Twp., Lancaster Co., complete treatment of milk wastes.

It was reported to the Health Department, that the Allied Chemical & Dye Corp., Newell, Jefferson Twp., Fayette Co., has complied with the Board's order to prevent the discharge of certain acid to the Monongahela River. The company has now made application for a permit approving plans for an addition to the treatment facilities for the treatment through neutralization of nitric acid, issuance of which the Board approved.

1949 Season, Size and Creel Limits on Game Fishes, Etc. in Pennsylvania



TADPOLES
JULY 2 TO OCTOBER 31. (Sunday excepted). NO SIZE. 15—(one day)

MUSKELLUNGE
JULY 1 TO NOVEMBER 30. NOT LESS THAN 24 INCHES.
2—(one day)

LARGE MOUTH BASS
JULY 1 TO NOVEMBER 30. NOT LESS THAN 9 INCHES.
6 (combined species)
(one day)

RAINBOW TROUT
APRIL 15 TO JULY 31. NOT LESS THAN 6 INCHES
10 (combined species)
(one day)

BROOK TROUT
APRIL 15 TO JULY 31. NOT LESS THAN 6 INCHES. 10 (combined species)—(one day)

SMALL MOUTH BASS
JULY 1 TO NOVEMBER 30. NOT LESS THAN 9 INCHES. 6 (combined species)—(one day)

BROWN TROUT
APRIL 15 TO JULY 31. NOT LESS THAN 6 INCHES. 10 (combined species)—(one day)

LAKE TROUT
JULY 1 TO SEPTEMBER 29.
NO SIZE. 8—(one day)

GREAT NORTHERN PIKE
JULY 1 TO NOVEMBER 30. NOT LESS THAN 16 INCHES.
4—(one day)

PICKEREL
JULY 1 TO NOVEMBER 30. NOT LESS THAN 12 INCHES.
6—(one day)

PIKE PERCH
JULY 1 TO NOVEMBER 30. NOT LESS THAN 12 INCHES. 6—(one day)

FROGS
JULY 2 TO OCTOBER 31.
(Sunday excepted)
NO SIZE. 15—(one day)

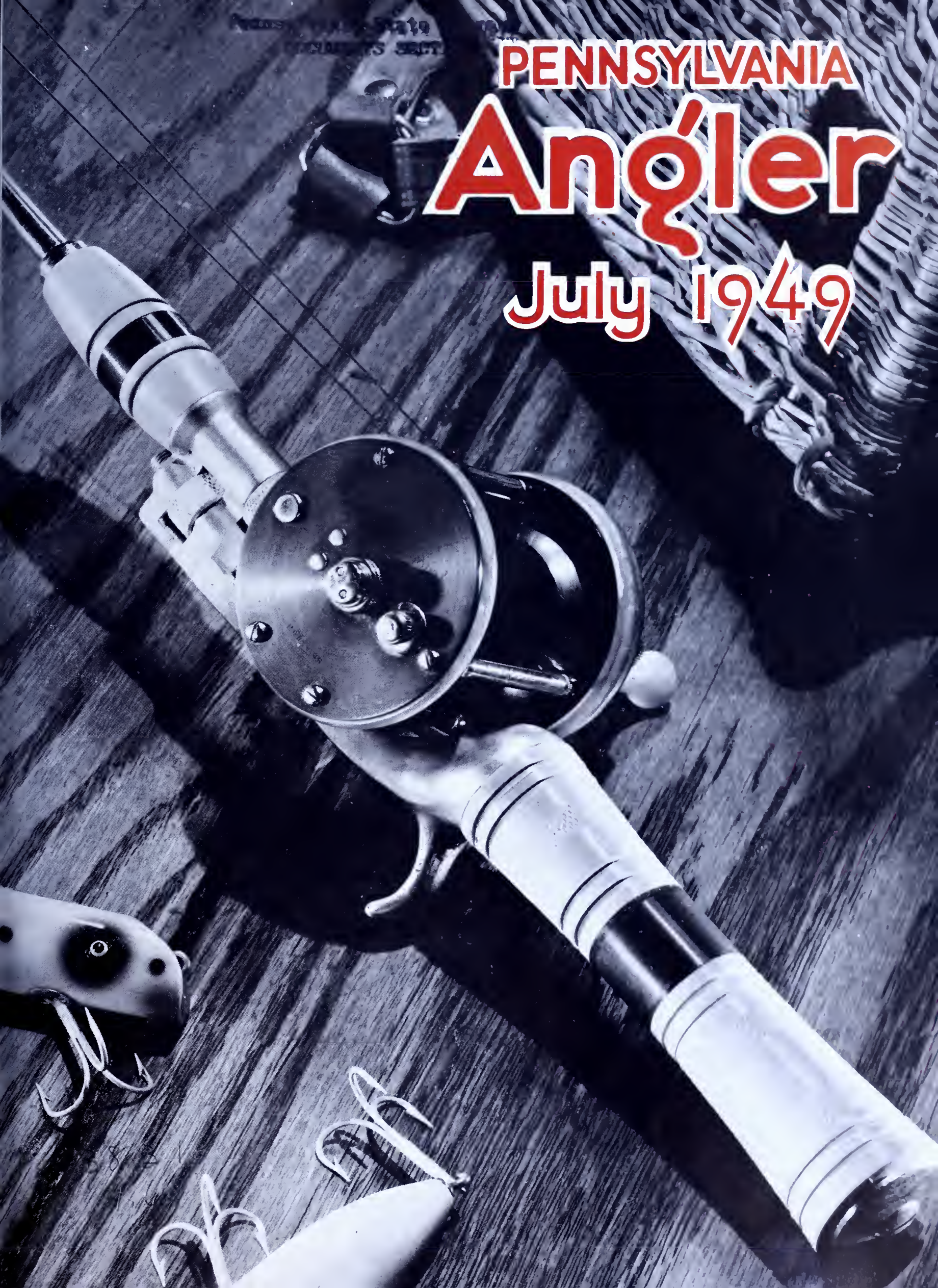
BASS: White, Crappie, Strawberry or Calico; SUNFISH or BLUEGILLS, (any time of year, no size and 15 combined species of each). ROCKBASS, (otherwise known as Red-eye or Goggle-eye); YELLOW PERCH; CATFISH; SUCKERS; CHUBS; FALLFISH; CARP, (any time of year, no size, 15 in one day. EELS, (any time of year, no sizes, unlimited). BAIT-FISH or FISH-BAIT, (any time of year, no sizes, 35 of each or 50 combined).

BUSH

TERRAPIN
(Red Leg)
NOVEMBER 2 TO MARCH 14.
(Sunday excepted). NO SIZE.
5—(one day)

PENNSYLVANIA Angler

July 1949





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HON. JAMES H. DUFF, Governor

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COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA
FISH COMMISSION
HARRISBURG, PA.



The Angler

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The Cover . . .

is symbolic of July, bass fishing and the short rod with which many kinds of lures are offered to the scrappy warm water game fishes. The rod handle and plugs have been molded from the plastic Tenite.

The Greatest Good For the Most People

Conservation is the opposite of sin—practically everyone is for it. But few are at all sure what they're for, says an editorial written for the May *Hunting and Fishing* magazine by Editor Aaron Sternfield. And he concludes his essay, one of the most enlightened that ever appeared in a commercial outdoors magazine, with these words:

We have been selfish for too long. We have often been conservationists only when it served our interests. Conservation isn't improved habitat for wildlife, it isn't restocking, it isn't predator control, it isn't pollution control, it isn't better agriculture, it isn't the wise use of our resources for making goods. It isn't any one of these things—it's all of these things. It's not the parts—it's the whole.

Unless we can see the whole picture—and see it right now—we might as well forget conservation, because we don't know the meaning of the word. We're at the crossroads. We can travel our own selfish way or we can take the other way and the road marker says "The Greatest Good for the Most People."

Now, these are stern words; they would not be likely to appear in a publication that was devoted solely to hunting and fishing, to methods of taking game. They may seem slightly less than spectacular here, but they are shocking in the commercial field, or were until outdoors editors began to develop a social conscience. Here are words that show an awareness of facts, a realization that conservation is composed of many problems with a multitude of answers. Mr. Sternfield is asking his readers to lay aside their guns and rods for a moment and face the complexities of their great sport.

These quotes above are the conclusion of a long essay detailing the diverse points-of-view of sportsmen, politicians, businessmen and farmers in this matter: they're all for it but they don't agree on what it is. The editor takes a crack at defining (or redefining) that much-abused word:

Conservation is that use of soil and water resources which assures the greatest good for the most people.

This is not original—nor does Mr. Sternfield pretend that it is—but he is correct in the need to emphasize that definition again and again . . . "the greatest good for the most people." The plow destroyed the prairie chicken, but the greater good demanded that the plow be retained—if it be used wisely, in the best interests of the soil rather than the species.

But Mr. Sternfield fails to define "conservationists" when he writes that:

Conservationists alone cannot show us the way because conservationists don't always understand fully the needs of sportsmen, businessmen and farmers.

He's on tricky ground here. If a professional, well-rounded conservationist doesn't understand the manifold needs, who can? He must, in performing his duties, consider wildlife, industry, farming, power projects, public relations and a great many other phases of daily existence. If he cannot form a synthesis, a center about which all interests can gather, then where shall one be found? Shall a historian be ignored because he did not create the events he interprets?

But nothing will be done if it must be done solely by professional conservationists; nothing will be done until all of us understand Aaron Sternfield's basic thesis: that the answer lies in considering that which assures the greatest good for the most people.

Dan Saults—Missouri Conservationist

The Low-down on Pymatuning Fishing

By N. R. Casillo

WITH a happy grin bespreading his face, one of the quartet standing before me announced, "Well, we finally slayed 'em."

The scene transpired at Pymatuning Museum where I hold forth on weekends for six months of the year.

"Were they nice ones?" I asked the happy fishermen.

"Come on down to the car and decide for yourself," came the invitation.

"Fair enough," I remarked as we headed for the parking area on Ford Island.

On the way I could not help but recall that this was the quartet's third trip down from Cleveland. On the first two sallies they had caught exactly nothing.

Nestling in an ice-ribbed box in the rear compartment of their car were four walleyed pike ranging in weight, as I subsequently learned, from seven to twelve pounds.

"We were scheduled to vacation in Canada next month, but we're coming here instead," volunteered another of the delighted foursome.

As a postscript to the immediately foregoing, I might add that the twelve days spent by the four fishing the most celebrated spots as well as many untried ones, proved absolutely fruitless. The men, of course, confined their efforts to the No. 1 game species of Pymatuning Reservoir, the walleyed pike.

In eight tries in 1947 my score was exactly zero. Of the six different individuals accompanying me all but one caught fish, i.e., walleyes. The conclusion derived from my observations is that Pymatuning walleye fishing is like a popular gaming device, one can never tell when the jackpot will spill out on to the floor. In the meanwhile, an occasional good fish helps sustain interest.

On a mid-July day in 1946, while skirting the angler-lined shores of a cove just across from Pike's boat livery just above the dam, one out of every six fishermen had caught one or more walleyes. This, it may be added, was by actual count. Other species observed on strings included some nice cats, crappies, carp and a few yellow perch. Singularly, on that particular day not a single bass was to be seen.

Those fishermen who swear by the walleye fishing are just as ardent in their choice of baits. Some assiduously believes that nothing can touch the so-called *flatfish* plug with a yellow finish while others are just as positive of the efficacy of junebug spinners trailing a nightcrawler. In my case, I have tried both and have yet to record even a slight "bump."

A couple of years ago opening day devotees of the gentle art really had a field day. Nearly every one caught walleyes. One bothouse is said to have registered 800 fish. I was one of the few failing to connect. For all I know, I may have been the only dud. No, come to think of it, Ray Sickles, manager of Pymatuning Game Refuge, also got skunked. Incidentally, that's the year that Crawford county's Fish Warden "Tid" Sheldon's wife masterfully played and landed a nine-pounder.

For those of you who wish to give the walleye fishing a whirl, try the approved spots south of the Causeway connecting Espyville, Pennsylvania with Andover, Ohio. Line up your boat with either of the two underpasses where the channels are supposedly located and troll down the lake, keeping from two to four-hundred yards offshore if the underpass on the Pennsylvania end of the Causeway is chosen. Most fishermen troll down about three miles, gradually swinging westward until they are just off of Burch's Landing on the Ohio side. Let me hasten to add that your Pennsylvania license entitles you to fish anywhere on the lake so long as you confine your activities to a boat. A Pennsylvanian or any other non-resident for that matter, cannot fish from the Ohio shore without an Ohio non-resident license.



Landing a nice one in the channel off of the Espyville boat livery. Many bigger ones are taken annually. The record walleye taken in Pymatuning was close to fifteen pounds.

The large basin fronting Burch's Landing is a favorite area. Many boats ply its waters almost constantly during open season. Another favorite walleye area is off the islands across the lake from Pike's boathouse. The usual procedure in both of these places as elsewhere is trolling, usually with forty to sixty or even more feet of line and be on the alert for snags especially when trailing longer lengths of line. As elsewhere mentioned, the flatfish in a variety of finishes and the junebug trailing either a nightcrawler or a minnow are considered tops. Incidentally, walleyes are frequently caught by still fishermen who literally line some sections of both the Causeway and certain shorelines.

I have neither experienced nor seen better crappie bass fishing anywhere than may be had practically anywhere on the reservoir; this between the time the ice leaves until well toward the end of June. Favorite but not necessarily best spots for these members of the sunfish family are anywhere in the vicinity of Pike's at the Jamestown end of the reservoir, along both sides of the Causeway, and in the vicinity of the boat livery at what is known as "the-end-of-the-road" on the Linesville end.

A log-jammed cove practically across the way from the pillared Museum entrance is one of the busiest and "fishiest" spots on the lake during the month of May. Scores and frequently hundreds of fishermen balance themselves on the floating logs fishing the leads, pockets and other openings in the jam itself as well as in the open water beyond. Action is always brisk and frequently furious. Needless to add that the best bait is a small minnow obtainable at any of the several minnow hatcheries in the area.

It is my candid opinion that the plug fishing for bass that Pymatuning is capable of producing will not come into its own until the turbidity of the water is reduced to the point where the bass can readily discern the plug. Secchi's disk, a white disk somewhat less than eight inches in diameter used by biologists in determining the transparency of water, completely disappears when submerged to a depth of

approximately seven inches. Of course there are quiet and protected areas that are not as turbid as open waters. As a matter of record, for a young lake, Pymatuning is clearing at a satisfactory rate. Also, the turbidity is caused largely by organisms essential to fish life. The organisms will deminish to a more satisfactory point with the reduction of organic matter of which the lake still has an abundance. Bear in mind that scarcely more than a decade and a half ago areas now comprising the lake bottom were fields, pastures, cleared woodlands, and bogs. Pymatuning has indeed come a long way. The reservoir attained its 15th birthday in January of this year.

Now, don't think for a moment that there are no bass in the reservoir. Many of the lunkers in its productive waters would make many a better fishing lake green with algae. Even now some plug casting may be had. Many a fine bass is taken in the log-choked and stump-dotted shallows between Clark's Island and the Pennsylvania railroad tracks, the latter skirting the site of the warm water fish hatchery now under construction. This, of course, is on the Linesville end of the lake.

One evening chance permitted me to run across a fisherman who regularly plugs the aforementioned area. At dusk he furtively passed a lone cottage at the end of a long lane a mile or so northwest of Linesville. I chanced to be a visitor at the cottage and spotted the fisherman as he whisked past the row of evergreens edging the front yard.



Employes of the Fish Commission's Pymatuning Hatchery stage a seining operating for students of the Game Commission's Training School.

"Who's that?" I more or less asked myself, but loud enough for my host to get it.

My host chuckled. "That's Bill Gallagher," he finally answered.

"Where does he fish?"

"In the cove at the end of the lane—that is according to him."

I knew the area for what it was. "Why, there's not enough water there to float even a medium sized bullhead," I remarked.

"That's what I thought, too, but he gets bass, big bass."

My eyes widened. "He does?"

"You'll see for yourself in an hour or so. Although Bill is not too sociable he'll stop on his way home to trade a word or two."

An hour and ten-minutes later by my watch, we heard a shuffling step on the porch. "There's Bill now," observed my host as he cast aside a newspaper and stepped to the open door. I was right behind him.

"Well, how did you make out tonight, Bill?"

"Oh, all right, I reckon," Bill answered with a shy grin as the porch light played on his almost emaciated face.

After introductions we walked to the evergreens and played a flashlight on the fish lying on the fragrant needles. A low whistle unconsciously escaped my lips. The four large mouths were practically identical in every respect. They weighed exactly two-pounds apiece

"What did you use?" I asked.

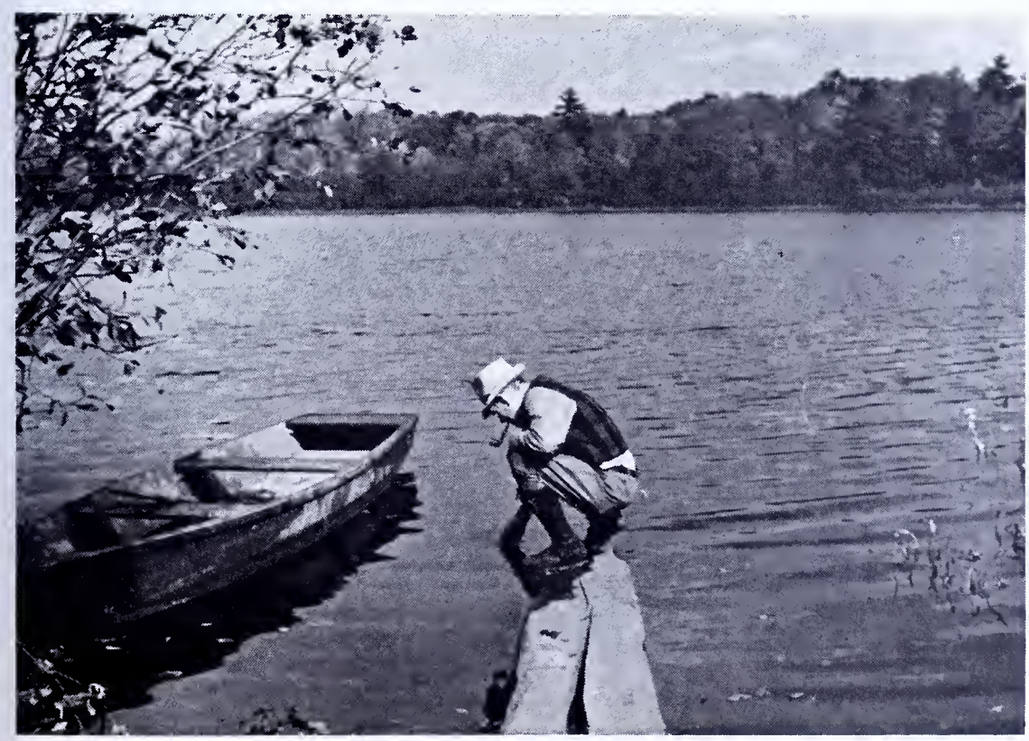
"A crippled minnow," came the response.

Next morning we had two of the fish for breakfast.

In a few years the opportunities for good plug fishing will be practically boundless. That vast comparatively shallow part of the reservoir lying north of the Causeway is ideal for the five-eighths ounce plug. Even now those literally unfished waters might pay off. Unfished? Virtually, as the area is closed to outboards.

Since its inception Pymatuning has been synonomous with the prodigious number of carp found in its waters.

(*Turn to page* 20)



A sample of Pymatuning shoreline in the area above the Causeway. Looks ideal for plugging. The crappie fishing on the far shore is extraordinarily good.

Angling for Black Bass

By Don Shiner

Part I

(Angling for Bronzebacks is one of the most widely practiced sports in Pennsylvania during the vacation months. Here are the most popular methods for taking this game fish, both on live baits and artificial lures. Part I deals with live or natural baits, the second part which will follow deals entirely with artificial lures of all types, color and action.)

THERE exists today two distinct and controversial groups of anglers —trout puriest, and second, those addicted with the bass game. While each are really the King and Queen of game fish, the really rounded out angler should not turn up his nose at either! However, it is good for each to have his own ideas on angling, the discussions which generally follow seem to keep this sport ever growing and alive.

We are indeed fortunate that both species of these fish inhabit our streams of Pennsylvania and in our immediate streams which are accessible to every angler.

The close of trout season usually finds the angler devoting his angling time to the many streams and lakes which have a fair population of bass.

There are two species of bass, the large mouth (micropterus salmoides) and the small mouth black bass (micropterus dolomieu). Both can be found inhabiting the same water but generally each seem to group toegther and seldom can both large and small mouth be found living in the same area. They of course are the largest members of the sunfish family and are nest builders during the spawning period as are all members of that family.

The male parent participates in excavating several inches of sand from the stream or lake bottom near the shore line. The eggs are laid in ribbon-like masses in May or June. The female may lay 1000 eggs or as many as 5000. However, soon after the female deposits the eggs in the nest, she departs to deeper water. The male continues to guard the nest unceasingly until the roe hatches, which is generally within two weeks.

The large mouth variety of black bass grow to greater proportion than does the small mouth. Aside from size, there are other ways of distinguishing the two apart. In the large mouth bass, the maxillary bone (the upper jaw bone) always passes beyond the eye, and of course, this characteristic is not found in the small mouth. This is one of the easiest ways of quickly distinguishing the two species.

The small mouth prefers clear, moderately cool and clean flowing streams. Generally they choose the rock and stony bottoms to harbor near and usually avoid muddy bottoms. After the spawning period they become active feeders and remain so until extreme cold weather sets in.

The large mouth prefers the weed beds and lily pads for their choice locations and like the small mouth acquires much of their food from the surrounding aquatic creatures and also from the surface of the water. It is quite common to hear of small ducklings, large mice and birds being devoured by this game fish.

Any one who has angled for bass to any extent knows that frequently artificial lures fail to produce and often it is necessary to resort to live bait. The bronzebacks are not too choosey eaters and gorge themselves on frogs,



The author landing a nice bass from Huntingdon Creek.

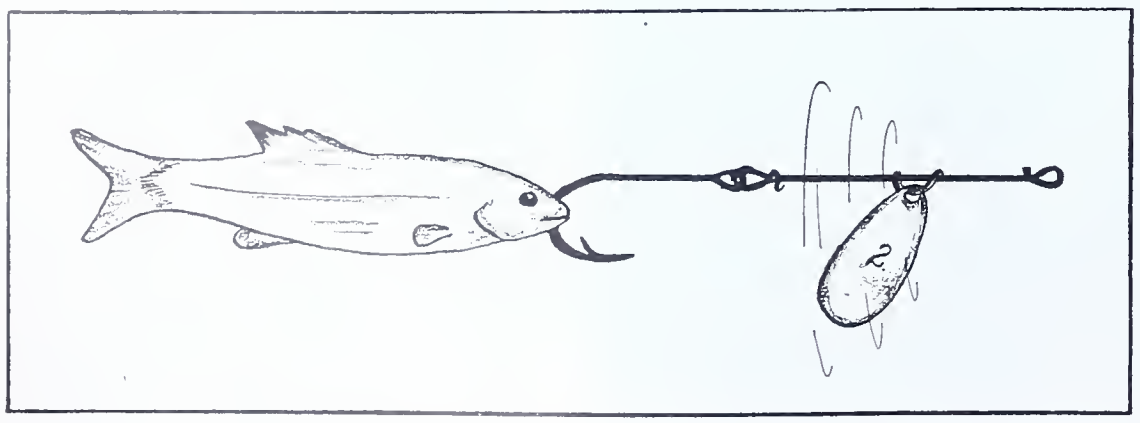
minnows, crawfish, salamanders, hellgrammites and other insect larva, as well as the common angle worm.

Since hellgrammites and crawfish constitute a great part of the bronzeback's diet, it is logical to assume that these baits are effective when used by the angler. It is best to use a large hook and hook the hellgrammite under the collar directly behind its head (a), or through the tail (b). This latter method is best, too, for attaching crawfish to the hook. Both are fished practically the same, that is, cast to a likely looking spot and allowed to sink to the bottom. The bait should be moved every few minutes to prevent the hellgrammite or crawfish from crawling under a rock thus being out of sight of the fish.

Once a bass grabs the bait, it generally runs a short distance, stops and then swallows the bait and makes a second run. This second run is the time to strike or set the hook. However, striking a bass which is taking a hellgrammite is an uncertain proposition. Sometimes it seems almost impossible to miss no matter when the angler attempts to set the hook, and at other times one must try all sorts of tricks to hook them.

If the striking bass really means business, his run will be sure, steady and strong. Other times they pick up the bait, run a short ways then drop it, these are the bass that try one's patience. Sometimes teasing helps when they take the bait this way, that is, if the bait is deliberately pulled away from the fish it seems to enrage the fish so that they strike more savagely.

Of course, the small mouths often



A spinner placed in front of a minnow and slowly trolled behind a boat is an excellent way of taking black bass.

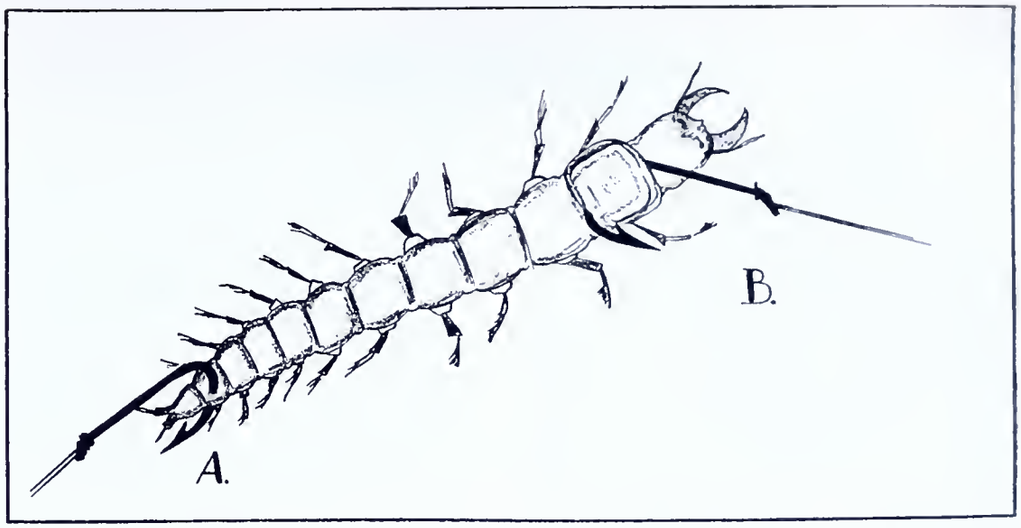
nove to the current and fast moving waters of the stream to feed. This s only true in creeks and rivers, not akes since there is little or no cur-ent present there. At this time a ıellgrammite or crawfish cast up and across stream and allowed to be car-ried along by the current brings re-sults. When they seize the bait, they run up or down stream and time should be allowed before striking for the bronzeback to mouth the bait entirely.

Allowing these fish to run, taking so many yards of line often causes con-siderable amount of trouble setting the hook. If the fish takes the bait down stream and runs toward you, there is often a large sag or belly in the line. Attempting to strike when this is in evidence only seems to signal to the fish that something is wrong and the bait is quickly dropped. To correct this, after the fish has completed the run, the line should be retrieved slowly until it is nearly in a direct line of the fish and a steady throbbing can be felt. Then the angler should set the hook hard and swiftly.

The bass found in the fast moving streams are less hesitant in taking the bait once they strike; those of the lakes seem to play or take a longer period of time to swallow the bait.

There are numerous soft rubber lures on the market which resemble the hellgrammites and crawfish, but to the writer, they seem of little value. Unless they are used so that when a fish strikes at one, the hook can be set immediately, or they quickly expell the imitation. Perhaps I do not know the best methods of using these rubber imitations, but I have given them numerous trials and generally draw a blank or only a few fish for the pre-sentage of striking fish.

Often times bass will refuse these two natural live baits and often re-quire worms, frogs or minnows or ar-tificial curiosity lures to arouse any interest. At such times, I generally give it one more try with a hellgram-mite turned inside out. This gives it a whitish appearance which resembles a grub worm or insect emerging from



Hellgrammites can be either hooked under collar (B), or through tail (A).

a nymph stage and is often affective. Turning the hellgrammite, thusly, is achieved by cutting the head and col-lar from the body, starting the point of the hook at the tail, the tail is pushed through the body, the insect is then inside out. It is rather a sim-ple process and one that should be among every angler's bag of tricks.

Crawfish are ideal bait for bass in lakes. The bass often nose among the rocks looking for them. When using them, they should be fished on the bot-tom and moved frequently so that they don't hide away.

Ordinary worms, especially large night crawlers, are good baits for small mouths. The worms should be hooked lightly so that they remain alive and active. Often, two or more night crawlers on the same hook brings more action due to greedy nature of the bass. This bait can be fished on the bottom or cast out into midstream and retrieved slowly.

One of the best methods, especially for lake, is the drift fishing method. This method is best when a boat is accessible and a light wind blowing. Merely allow the wind to push the bait slowly while the worms are cast ahead and allowed to remain there until the boat is nearly on top of the bait. A dobber can be used to keep the worms slightly above the bottom, and it gives a delight close to dry fly angling to watch the dobber's move-ments when a strike occurs.

When a cast is made ahead of the boat and the wind pushes the boat slowly towards the dobber and bait, the line should be retrieved so that there is no sag or belly in the line. Greasing the line so that it floats greatly facilitates this method of fish-ing.

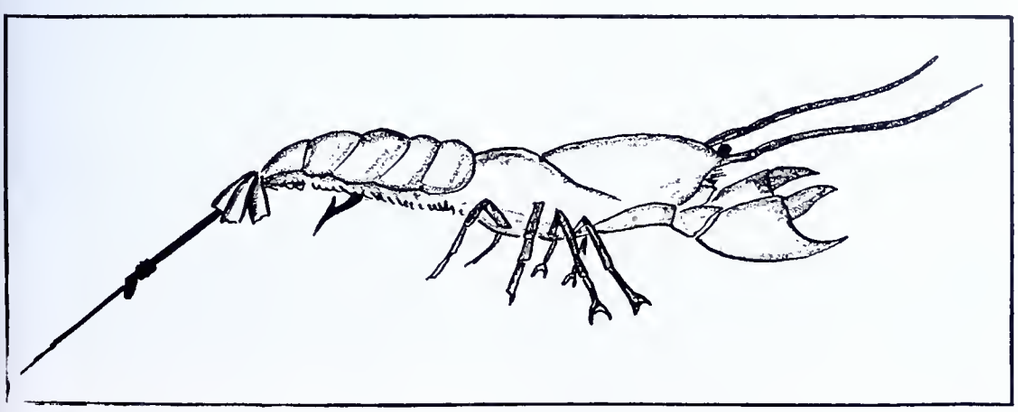
Casting the bait behind the boat is trolling rather than drift fishing, and while it is another productive way of taking bronzebacks, the drift method is a superior way of fishing providing the drift is not too fast.

After the drift is completed, the boat should be returned to the starting point and begin again. This should be done if on the course of the drift a bass was taken. Another drift over that section will probably be success-ful again since it was probably over a good bass location.

Worms are not the only bait which can be fished this way, but minnows, one of the very best live baits for bass, used this way generally gets good results. It can readily be seen why this method of fishing usually brings good results when compared with an-choring the boat and still fishing. About 75 percent of the water in the lake contains few or no fish, and if fishing constantly in one place, that particular spot may not be suited for bass occupancy. If conditions allow only still fishing, then by all means change positions after twenty minutes or so of inactivity.

Minnows are best hooked under the skin behind the dorsel fin or through both lips. The latter method will cause the minnow to live longer and be more active. However, be sure the hook is placed through both lips and not just through one as this will result in the minnow quickly drowning.

(*Turn to page 20*)



Hooking crawfish in the tail as shown is one of the best methods when angling for black bass.

Finned Dynamite

By Jack Anderson

THE chain pickerel, found only in the United States from Maine to Florida east of the Alleghenies, into the Mississippi Valley to Texas, in southern Missouri and the Tennessee River system in Alabama, is the only game fish pickerel in the World.

He's a little fellow as the Pike Family goes, rarely beating seven pounds, with the usual catch about two or three pounds. He has a long, thin body, bulldog like jaws, and green and cunning eyes. Usually his color is green, but this color differs according to the colors of vegetation. When full grown his markings are the most distinctive and certain of any pike: his dark lines form a definite net, or chain.

We remember him from boyhood days: our wicked little friend of the mud pond or shallow creek. Usually he lays like a stick in the water. But he is pent-up dynamite. Ever watchful of prey, if something demands his attention he shifts slightly, ruffling his fins—the first warning of interest. If he decides to strike, his movement is almost too fast to catch. And his aim is deadly.

As kids in Pennsylvania we had two methods of fooling the Chain Pickerel. The first and earliest method is something I shall never forget. Steel poles or sticks cut from the woods, knotted lines, and cranky reels, were standard fishing equipment. And we used perch fin with a chunk of white belly as bait.

The fishing technique was merely to flip the perch belly among the weeds or pond lilies and skitter it toward us. This action is of course the same as a spoon with pork rind, and today I sincerely believe it is more effective.



The red and white spoon—pickerel and pike killer.

We'd skitter peacefully for many minutes, perhaps dozing, or plotting a raid on a green apple tree. Then, *zoom!* A green snake would flash from the shadow of a pond lily. A sudden strike, and the battle was on.

If the pickerel wouldn't fall for this, we tried our second method. This was slower work and much to our liking if we could get under friendly willow trees on a hot summer's day. The method was fishing with a cork and live minnow, in the deeper water on the outer edge of the weeds.

Back in those days we landed many pickerel by either method. And we learned some points about the Chain Pickerel.

We learned, for instance, that movement is the most important single thing about pickerel fishing. A still object holds no fascination for a killer. We noted that after sitting for hours without a strike when cork or minnow fishing, we could provoke action by twitching the rod to excite the minnow. The pickerel, we came to realize, had been motionless shadows in the water until their greedy eyes detected signs of fright.

We also learned this motion had to suit the mood of the fish. On some days the movement had to be lazy and erratic; on other days swift. I've marvelled about this down through the years. When one pickerel feeds on slow moving bait apparently they all do. They seem to have this school fish characteristic, even though pickerel are lone wolves. Many theorists believe air pressure has much to do with this.

Several friends were fishing a Pocono lake and took a marvelous lesson on the importance of searching for the proper movement of a lure. All happened to be fishing red-and-white spoons commonly called dardevles although Dardevle is really a trade name for a particular brand of red-and-white spoon. Of the fishing party, Earl Rothrock fished the same territory with the same lure. By noon he had picked up the pickerel limit, and hard fighting pickerel up to twenty eight inches in length at that. The others had creeled a few scattered and scrubby specimen. Why?

The answer was simple. Earl



A surgeon's clamp is a handy pickerel tool.

dropped his spoon to the bottom. As soon as he felt the *hit*, he jerked, lifting the lure about a foot from bottom. Then he retrieved slowly with occasional upward sweeps and a pause while the lure wriggled again to bottom. His movement was the *slowest possible.*

And that *slow* retrieve was the answer on that particular day. It was the difference between a packed creel and empty hands. Having the proper lure is half the battle—fishing the proper lure properly is the other half

Back on the pickerel ponds of boyhood, we learned about the importance of movement, and grasped the fundamental faults of minnow fishing with cork. One of the gang innocently hit on a solution.

I think he was getting ready to quit for the day. He was reeling in, doubtless coaxing along a worn-out reel, for we fished then with our father's cast-offs. Suddenly a pickerel struck—the first strike of the day. A good fight followed and a nice fish was creeled. So our friend tossed in again and began the same slow retrieve. Again a strike; again a fish. A discovery had been made which was to be our greatest boyhood strategy.

We learned from that experience you can double your pickerel catch when using the cork and minnow method by tossing out your bait and slowly retrieving. For this purpose it is best to hook your minnow through the nose, although it is possible to use the dorsal fin technique.

Several years ago Hank Wallis, Rich Weaver and myself fished pickerel on Blue Ridge Lake, Monroe County, Pennsylvania. It was a cloudy misting day, cold for September in that latitude.

The lake was small and shallow, a typical Pocono lake, about fourteen acres of water with an almost uniform four feet depth. It was ideal pickerel water, with pond lilies fringing the southern shore and swamp thickets pushing beyond the water's edge on all other sides.

Since Hank and Rich liked still fishing, they took one boat and I another. We had brought a can of shinners along and I decided on a boyhood stunt. I rigged up bamboo fly rod and cable leader and number two hook, set a cork at about three feet. Then I rowed about ten feet on the outer edge of the pond lilies. I tossed my minnow about fifteen feet from the stern of the boat and slowly, smoothly worked my way around the lake.

Minutes dragged by uneventfully. A light east wind fanned in, brushing tiny waves against the gunwhales; just enough wind to keep me glued to the oars to avoid grounding on lilies. Rich and Hank had slipped anchor in a quiet cove, and now and then mumblings tumbled along with the wind from their direction.

A quarter turn around the lake, and then my cork dipped, jumped back to the surface, and walked across the water. I propped the oars on the gunwales and took up my rod. Quietly I pictured the minnow.

And picturing that minnow is an important thing. If you have a two inch minnow you can set the hook pretty quick. If it's a four incher you've got to give the pickerel time to mouth the bait. In my mind's eye I saw the pickerel swimming along with the minnow across his mouth. When the cork stopped I visioned him flipping the minnow in his jaws so that the head pointed down throat. When he moved out again I set the hook.

The pickerel was on, a fast moving fellow with stubborn ideas about tangling himself in the pond lilies. He and I argued the point and that day I won. He rolled in to net, a nineteen incher: an average pickerel, a grass green fellow with clear black lines locking in a perfect chain and with blood red pectoral fins. Quickly stringing him I rebaited and pushed the boat to resume the fishing journey.

Doesn't it seem that attitude has something to do with the day's catch of fish? Ever start out feeling like really *fishing* and find everything seems to go your way? Well I had that feeling on Blue Ridge Lake, and before another five minutes had passed was hooked into the second pickerel.

This pickerel was slower. He took the cork to bottom and held steady. I gave him plenty of time before setting the hook, then pulled into a solid home. Plenty of action followed the set, ending with twenty-three inches of pickerel on the string, an above average fish.

Now I worked into a cove, where thickets grew several feet into the water and I imagined I could see pickerel sprouting from the weeds. Eagerly I resumed my slow minnow trolling and hadn't gone ten feet when something struck again.

The *something* was a yellow perch. Picked up three nice yellow perch along those weeds; then a bass. But the pickerel fishing was over and the east wind grew stronger, spraying a fine mist ahead of it. I decided to take advantage of the wind. Rowed down to the east end of the lake and permitted the boat to drift, dragging the line behind. I had picked up northern pike this way up in Michigan.

But the pickerel were sleeping. Soon I met Rich and Hank on the boat dock.

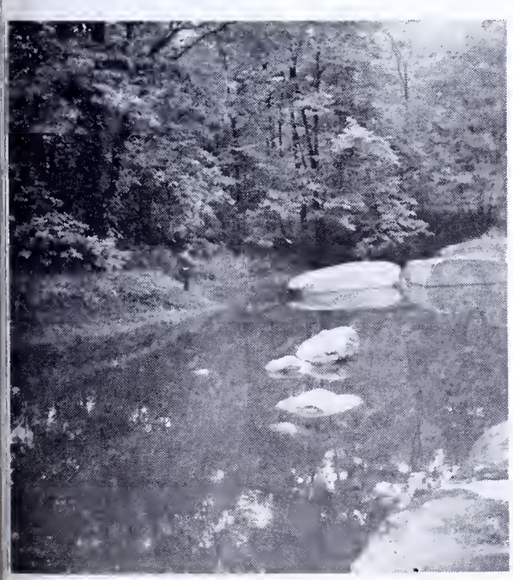
They had been anchored in the cove all morning. Their eyes popped at my catch. They had two perch between them.

"Maybe you got something in this drifting business," Rich said. "It's more work, but—"

"The old story," Hank said. "Movement gets the pickerel."

As kids we made many observations on the habits of the Chain Pickerel, although at the time we were just having fun. When the ice was rotting and breaking up on lakes and ponds we ran the shorelines looking for the unusual, the Spring sap astir in our veins.

One of the gang happened to see fat suckers working upstream, moving sluggishly and working their mouths along the rocky bottoms. This was a challenge. We straddled the narrow places and tried our luck with our hands. It was great and innocent sport for kids who had never heard about fish wardens and such. We managed to toss a few fat fish out on shore. And then we spotted some greater prizes.



Tohickon creek, southeastern Pennsylvania pickerel water.



Two enthusiasts cork fishing for pickerel.

We saw two large pickerel in a pool of the creek. To our boyish eyes these wicked looking warriors were prizes too delicious to resist. One of the gang salvaged an old wire screen from a convenient dump and the chase was on.

Somehow or other we nabbed one of those pickerel. Looking back I guess he wasn't more than fourteen inches long, but he was a monster then. We took him to our woodland hut and decided on a fish fry.

But something stepped between us and that wonderful pickerel. The fellow doing the cleaning announced he was full of bugs. I took my look and saw what looked like bunches of yellow grapes on the inside of the fish. It was so odd that we put them in a jar and took them into our village.

Followed our first lesson in conservation.

An old fisherman told us what those tiny yellow grapes were. They were eggs and we had killed not one, but perhaps hundreds of pickerel. Those two pickerel, the old fisherman said, were "running" the creeks to spawn.

It was a fascinating story and we wanted to see more of it. We followed the creek bank then, studying the pools.

We didn't see any more pickerel that day, but in following years were alert for the pickerel run. There were pickeral in the feeders to our dams and

(*Turn to page* 21)

Low Water - - Friend or Foe

By Howard M. Ernst

THE alibis of the angler are many. It is unfortunate that within the bounds of our ever extending areas of population the all too frequent empty creel constantly requires the self defense of reasonable alibis. Many of them are justifiable. A lot of them are mere expressions of thought to bolster the courage and faith of the angler in his ability as a fisherman. Personally I prefer to believe that in most instances failure has been due to my own inability to properly diagnose the stream problem presented or to perform with the sufficient skill required to deceive my quarry. Making excuses for yourself will never improve your fishing and eventually may sour your disposition.

One of the most overworked alibis for empty creels is the trite complaint of high or low water. Actually it is a moot question as to whether low water isn't a condition much to be desired.

In general when streams are running low and clear they present, in comparison with the reverse condition, several distinct advantages as against only one disadvantage. Furthermore, with skill and care, the greater part of this disadvantage may be nullified.

Let us first consider the single adverse aspect of the situation. When the river is running full or in medium height the possibilities of disturbing fish are at a minimum. The depth and speed of water eliminate to a great degree the necessity of fine leaders, delicately cast small flies and care in their presentation. In addition one need not pay too much attention to shadows. Reversing the conditions, it is evident the one and only problem presented by low water is to place your lure before the trout without frightening him. However this is not an unsurmountable obstacle. If you can cast well enough to cover the ground in a river in flood, you certainly will be able to handle the line properly when the water is at midsummer height. All that is required is a little care and slow motion. Approach the stream with an eye towards your shadow, keep it behind you if possible; if not, fish ahead of it and don't let it fall over a likely looking spot. Do not wade any nearer to where the fish may be lying than your casting ability requires. Should their position be difficult to approach from upstream and you prefer to fish wet rather than dry, remember a wet fly may be effectively fished up stream just as well as the floater. If in spite of your precautions you visibly scare the trout, study the situation, quietly back away from the stream and return in an hour. The fish by this time will have resumed their former position. Then profiting from the previous experience, you should be able to successfully present the fly to them.

Leaders and lines cast shadows as frightening as the human body. Use a leader no shorter than nine feet or as long as you can comfortably handle. It should be tapered to 3X or finer and well soaked, so as not to float. This minimizes the frightful shadow a leader can produce on sunlit water. Do not hesitate to risk a losing battle with a big fish because of fine taper. I have landed a nine pound salmon on 3X gut. I admit such a performance is not to be normally expected but the consciousness of using extremely light tackle with the odds thus in favor of the fish, will greatly add to the thrill and sport of fighting each trout. In addition you will at all times be keyed to a high pitch and thus forced to careful handling and quick thinking. Under such circumstances the angler will be amazed at the remarkable feats he will be able to perform with his delicate tackle.

Continuing the discussion as to ways and means of overcoming the low water handicap of scaring fish, care in the selection of fly size is of great importance.



The angler is wasting his time here as the rift runs over smooth gravel affording no shelter or resting place for good fish.

Unless matching a hatch, flies no larger than 12s should be used nor bucktails or spinners tied on hooks bigger than 8s. Incidentally, both these latter lures, if properly fished, may prove deadly in low water.

There are of course situations during the summer months when trout may be found resting in pools devoid of even enough current to move a dry fly a foot in an hour. Sometimes these pools are located in the center of the river and are subject to full sunlight. Should it be a calm day, such a situation is hopeless but as is most always the case, if there be some shade, a slight ripple on the water or a small current, the pool can be fished by executing your casts with care and deliberation. Instead of casting more or less straight out and at the trout's nose, you direct your fly to a spot several feet in front of him and with a slight upward effort somewhat as in bait casting, aim a foot or so in the air, you will find that a fly size 12 or smaller will gently drop to the water without creating any surface disturbance. Naturally, before casting either a floating or submerged lure, it is presumed that you have taken all possible precautions to eliminate undue race or drag. In low water, both are deadly. If they occur, don't make matters worse by hastily retrieving the line. Let the fly run its course, then light a cigarette and rest the pool for a few minutes.

By this time you will be wondering how, if all this care is required to properly present a No. 12 fly to a trout at low water, it is possible to fish a spinner or bucktail. There is one answer in the case of the first lure and two in the case of the second. They are rather simple ones. The first (which applies to both) is, do not permit the lure to drop near the trout. When making your cast, aim at some point on the water several yards from where you expect the fish to be resting but at a point from where you can conveniently draw the lure across the trout's line of vision. The distant plop and disturbance of the spinner or bucktail as it hits the water's surface will often times arouse the interest of a lethargic fish.

Rocks or boulders strategically placed in the stream will afford an even better opportunity for effective low water use of bucktail or spinner. Cast directly at these objects, permitting the lure to lightly hit them and slide into the water. Then commence your retrieve in such fashion as "current" conditions warrant. When these lures are used in this latter manner in midsummer, white



Low water on the Lycoming. A long line and long leader required but no guess work as to where to cast them. 8 ft. 4 oz. stiff action rod best.

water, they will prove to be extremely effective. Remember at sundown during that time of the year, the trout move out of the pools and into the white water in order to refresh themselves by the added oxygen thus obtainable.

The second method of fishing this type of lure is applicable only to the bucktail. Why it is so rarely practiced, I know not. Just fish it upstream. In this manner you can approach nearer your fish, thus shortening your casts and avoiding a disturbing splash. Try and keep the line away from the trout's vision and draw the bucktail down stream at a rate somewhat faster than the current. I have observed many a trout turn downstream and chase the whisk-broom finally taking it, in a series of spectacular leaps. At times in placid water, the fish follow this lure under water without creating any visible disturbance till they finally get below the "buck" when the swirl of their broad tails indicates they have turned to grab it, which they then do head first.

It now becomes obvious that it is well within the average angler's capabilities to overcome most if not all the disadvantages of low water, so let us proceed to analyze the numerous advantages that are presented to him when he finds the streams at midseason height.

Translated into economic terms, low water affords the maximum of efficiency in angling. There is no need for wasted motion or time. Every cast has a definite purpose and is directed at a fixed objective. In other words, one does not have to go on a fish hunt, blindly dredging a fast deep run or hopefully casting into a deep eddying pool. The map is plainly spread before the fisherman. The pools are clearly marked and generally the fish can be seen resting or working in the head or tail as the case may be. The boulders and rocks stand out as the current gently divides and slides by them. The depths of the gravel runs and flats are plainly visible. There is little question as to type of lure and manner of fishing to be used for the immediate water to be worked. You direct your fly to pass directly over the likely and frequently known resting place of the trout. Obviously unproductive water is passed over, no time is wasted. If fish are not moving in the pools, you move on to the white water or fast running flats, give the head and shoulders of the rocks a whirl and then drop your fly gently, close under a shaded bank. Each situation calls for a definite technique. There is little guessing in the matter. You become tense as you methodically cover the likely spots expecting each cast to produce the telltale bubbles of a large brownie sucking in the dry No. 12 Gordon Quill, or a sizeable brookie making a magnificent "head and tail" drive at your bucktail. There can be no question in my mind that low water is the trout's greatest enemy and the angler's friend.

The elimination of the element of doubt is a boon to the angler. If the action of his fly is visible at all times, if the character and conditions of the water clearly indicate that which will scare or fail to interest the trout, if the fish themselves are visible, the advantage is all to the fisherman. The angler then knows if he has properly or improperly presented the lure. If the latter, he can rest the spot, moving on to another part of the river to return later and try again. If the former, he can do likewise in the hopes of interesting the trout at another time. If the fish rises short or avoids the lure at the last moment he can look to his tackle. Possibly a smaller fly, finer taper or longer leader is required. In high water all that can only be guesswork. Much time and energy is lost guessing and you never know whether your guess is right or wrong.

In high water trout rarely show themselves; in low water, excluding a rise to a hatch, the odd one invariably betrays himself. Constant observation of the stream will usually disclose the telltale dimple under the bank, the quick sparkle and splash of a rise in the fast water, the furrow of a minnow feeder in the flats or the silver sides of a rolling trout in the pool. It is good to know where fish are and what they are doing. Add to this the possibility of also being able to ascertain exactly what you are doing or what your lure is doing and you become master of the situation. This rarely if ever can happen in high water. It is always possible in low water.

There is no excuse for a poor creel in midseason water other than your failure to take adequate precautions against frightening the trout and it is decidedly your fault if you have failed to do this.

All anglers look alike to each other; they talk and walk together, the high and low are equal. So are all men equal before fishes and even a fish doesn't care who catches it!

Plastic wood makes a good crack filler to stop leaks in boats.

New Aluminum Rod Case

Fishermen will be interested in a newly developed, economically priced fishing rod case just now appearing on the market. The case is a tube of aluminum alloy of smooth finish inside and out. The bottom of the case is sealed with a plug of pressed cork and the cap is shaped of the same resilient material, thus cushioning rod tips against batter. The cap is chained to the tube to prevent loss and has flat sides to minimize rolling of the case. The case will float when closed.

The case is supplied in either 1⅝ or 2 inch diameter for all rod lengths from 7 to 10½ feet, either two- or three-piece.

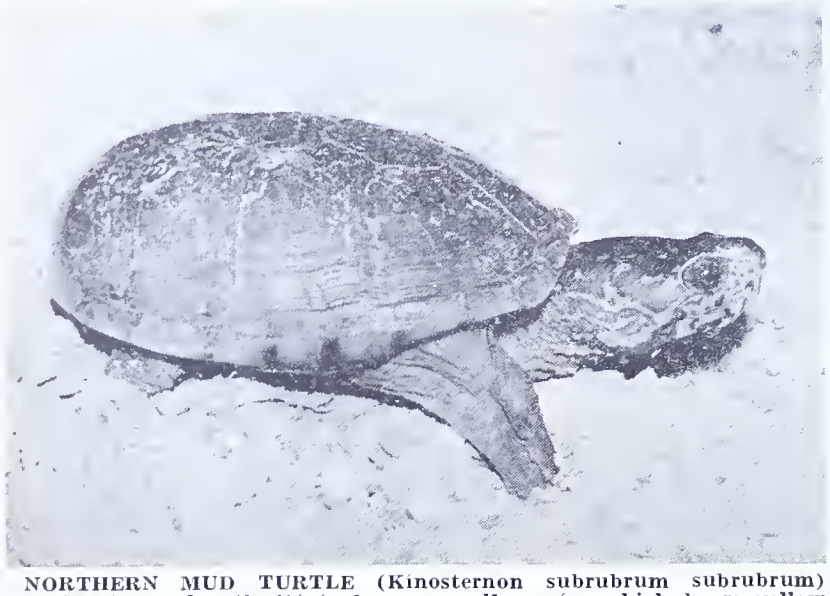
John R. McKee, Jr., president of McKee Industries, of West Newton, Pa., and an ardent fisherman in his own right, at first developed the case for his own use, later deciding to manufacture it upon advice of some of his fishing cronies.

PENNSYLVANIA REPTILES & AMPHIBIANS

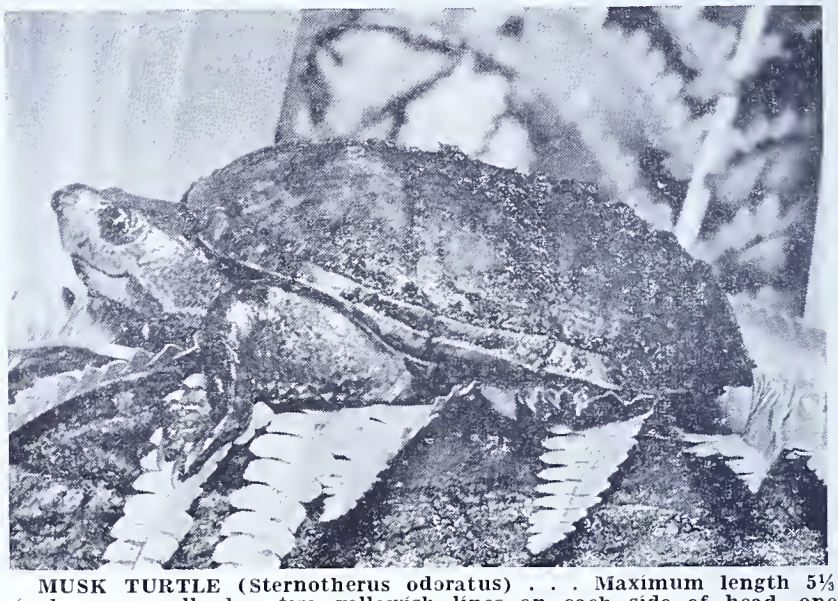
A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

No. 4 . . . Turtles



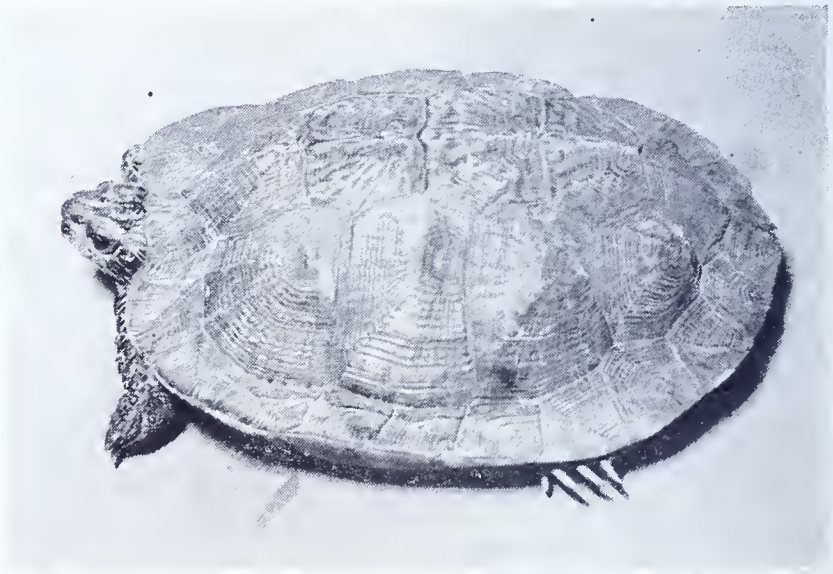
NORTHERN MUD TURTLE (Kinosternon subrubrum subrubrum) . . . Maximum length 4½ inches; a small species which bears yellow dots or mottlings on the sides of the head; has much larger plastron (lower shell) than the similar musk turtle; sometimes mistaken for small snapping turtle, but, like musk turtle, has shorter tail; frequents fresh water, but may be found in brackish water also; lives on food found on muddy bottomed waters; lays 2 to 5 eggs; has been found in 8 southern counties.



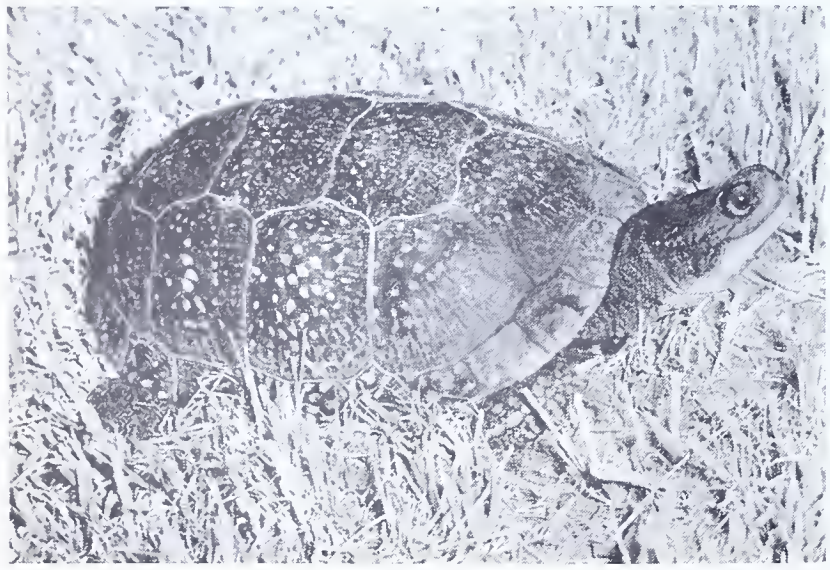
MUSK TURTLE (Sternotherus odoratus) . . . Maximum length 5⅓ inches; normally has two yellowish lines on each side of head, one above the eye, the other below the eye; plastron small giving little protection to legs and tail; occurs in quiet fresh water where it feeds on snails, earthworms and dead fish: name "musk" comes from musky odor of a fluid secreted by scent glands; fewer than 10 eggs laid in June or July in sand, stumps or muskrat houses; recorded from 21 counties in non-mountainous regions.



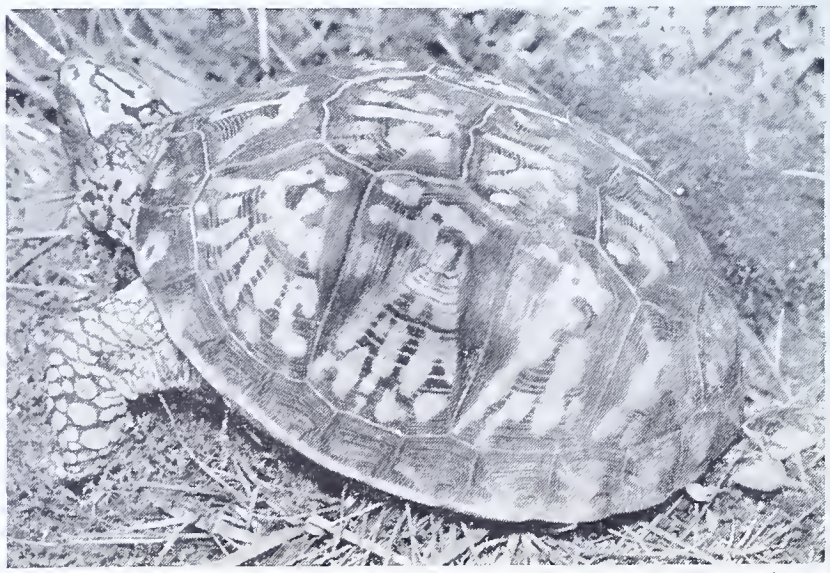
SPOTTED TURTLE (Clemmys guttata) . . . Maximum length 5 inches; easily recognized by the 20 to 90 round, bright yellow spots on its black carapace (upper shell); shallow streams, margins of ponds, lakes and marshes are favored haunts; diet is chiefly insectiverous and the species deserves protection; lays two to four elliptical eggs in sand, cinders or dirt in June; found in 29 counties in non-mountainous portions of state.



WOOD TURTLE (Clemmys insculpta) . . . Maximum length 9 inches; a large, semi-aquatic turtle easily recognized by its orange-red legs and its rough sculptured shell; may be found wandering on land during the summer, thus the name "wood turtle"; also found in streams feeding on insects and carrion; makes an ideal pet for children; lays small number of elliptical eggs in ground; recorded from 47 scattered counties.



BLANDING'S TURTLE (Emys blandingii) . . . Maximum length 10 inches; distinguished by its brilliant yellow chin and throat, and by its domed shell which is covered with streaks and spots of yellow or olive; although essentially aquatic, it has marked terrestrial habits; feeds on snails, crayfish, earthworms, fish and carrion; lays 6 to 10 elliptical eggs; occurs in Lake Erie principally, although there are published records, possibly based on escapes, from Union and Northumberland counties also.



EASTERN BOX TURTLE (Terrapene carolina carolina) . . . Maximum length 6½ inches; only Pennsylvania species which can withdraw its head and limbs completely within its shell and fold both halves of its plastron to form a tight "box"; hinge running across the plastron divides it into a front movable part and a hind part; may be found long distances from water but likes to soak in mud in hot summer; notoriously long-lived; lays 2 to 7 eggs in ground in June or July; recorded from 44 Pennsylvania counties.

BETWEEN RISES

Albert G. Shimmel

IN OUR modern competitive world the demand for speed and efficiency in daily life becomes a fixed habit to such an extent that we have almost lost the art of relaxation. It is true that our time on the stream is limited and we must of necessity make the most of the precious hours that come our way. If in the process we turn recreation into wreck-recreation then the value of angling is lost.

In my early days astream the obsession to cover the largest amount of territory with the greatest number of casts amounted almost to a mania. A day with the trout left me on the verge of physical exhaustion. My companion who operated under the same theory was in the same state. True, we took trout and fondly believed we were having a grand time when the truth of the matter was that we were missing much of the pleasures of the sport. Age and time have driven home the lesson that youth would not learn.

Many of the best catches of the year cannot be brought home and displayed on an oaken panel or served on the dining table. These are the incidental happenings that form the bright woof by which the fabric of angling is held together.

How can we capture the pungence of bruised evergreen twigs that line the creel; the bright opulence of a sunset; the pearl gray of the evening mists as the air chills above the water at dusk or the pepper taste of water cress that garnishes our lunch beside the stream? The easy comradeship of angling friends or chance acquaintances and the interesting glimpses of the abundant wild creatures are the by-products that are as valuable as the fish that grace our creel at the end of the day.

The White Swamp Honeysuckle is one of the fragant flowering shrubs that has an appeal to both eye and nostrils. Growing as it does on the banks of the freestone streams in association with the hemlock and its cousin the Rhododendron and blooming in late June or early July, its pale blossoms contrasting sharply with its foliage and the surrounding greenery. The blossoms furnish a luxurious store of sweets judging from the number of moths and other insects that lay claim to its bounty.

The sweetness of the perfume came down from the White Honeysuckle a hundred yards above. Slowly I made my way up to the moss covered log, intending to wait for Chet, who was fishing somewhere above. The early evening hatch had gone from the water leaving it undisturbed but the creel at my side held a trio of fair trout. Complete contentment marked my mood as I unsnapped the basket and laid my catch on a bed of fresh wood fern gathered from the profusion at hand. The pool above was still and the odor of the blossoms mingled with the curling smoke of my pipe. A small moth tempted to gluttony by the richness of its banquet dropped to the shallow water where it struggled for a few seconds then disappeared. What angler can resist the urge to cast over an actively feeding trout? The Honey Spider fell like a bit of milkweed-down, a few inches from the bank, trembled a moment, then disappeared. The fight was short due to the continued angry leaps of my quarry and when he lay in the net his short length was compensated by a heavy girth. After returning him carefully an investigation showed a deep pocket framed by the roots of the honeysuckle. The water within yards of his den was so shallow and uninteresting that the average angler passed it by without a second glance.

Each time I passed that way for the next two seasons "Chunky" greeted me with a willing rise and exciting fight. He became a personality to be treated with due respect. His size increased from a scant eight inches to a strong thirteen during the three seasons of our acquaintance. Then one day he was gone. Whether he came to his end in a landing net or fell prey to a predator will probably never be known . . . The White Honeysuckle still guards the tiny pocket and other trout rise on occasion but none have the personality of "Chunky."

One of our favored luncheon spots is a walnut tree which overlooks three pools on the famous Pasture Stretch of Spring Creek. Our pipes were going well and the canteens of after-lunch tea were conveniently near, as we sprawled in the shade. The whistle of the cardinal was broken by the liquid notes of a Baltimore Oriole resplendent in his orange and black. His more sedate colored mate gathered among other things, the twine which had been discarded from our noon sandwiches, to weave into her cradle, that swings in plain view from a high Silver Maple branch. We watched interestedly until the rings of rising fish marked the beginning of the afternoon sport.

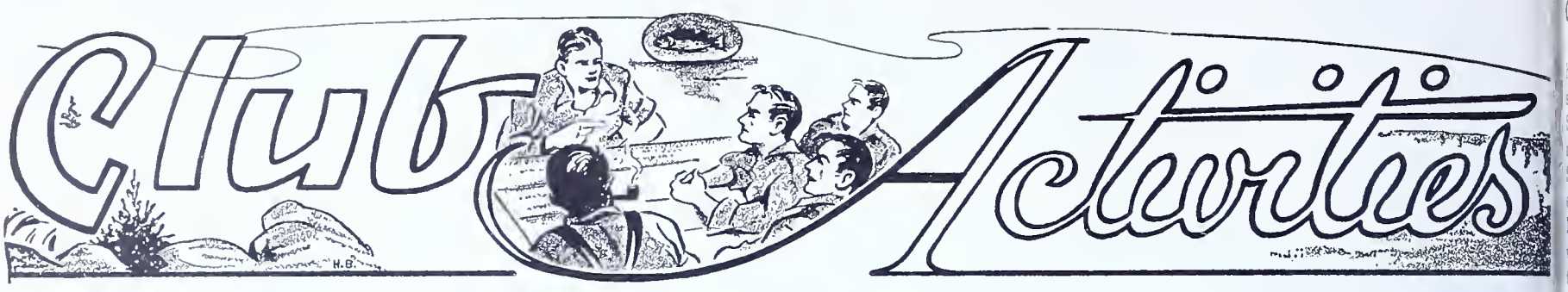


A few weeks later we visited the same spot and had the pleasure of seeing a fledgling sitting on a dead weed stalk a few yards from his nest tree. In his muted juvenile plumage there was but a faint hint of the colors that would be his. It was with pleasure that we examined him carefully at close range then passed on, much to the relief of his mother who scolded us roundly from an overhanging branch.

The first fly of the evening hatch dropped from the overhang of alders and danced for a few brief seconds above the pool. Another joined it and another. A rise marred the mirror of the pool and for a second the nose of a brown marked the spot where a drifting natural disappeared. My rod lay fully rigged on the gray sandstone against which I rested comfortably. Glancing at my watch I noted the time five thirty-five. The trout rose regularly then the willows parted and a doe stepped with dainty grace into the pool. With alert head she watched silently for a few moments then dipped her head and drank. A few dappled sun spots that filtered through the overhang turned her sleek red summer coat to patches of vivid orange. Satisfied at last she raised her head shook a few clinging drops from her muzzle, then silently disappeared again into the leafy screen of alders. My trout ringed the still pool again and this time I reached for the idle rod to begin the business of the evening.

Four evenings, during my stay at camp I had watched this little scene, a prelude to the evening fishing. The first evening as I stalked the pool she

(*Turn to page 24*)



Sportsmen Transfer Fish

Nanticoke sportsmen, under the supervision of Jack Opachinski, special fish warden, drained Hillside Pond and transported many of its fish to Lake Nuangola.

The pond, which had been stocked with fish by Nanticoke sportsmen for the enjoyment of youngsters in the area, was drained because a Coal Company is starting to strip-mine the pond area.

Equipment for draining the pond was furnished by John Kolitva, who operates the bait fish hatchery near Lake Silkworth. State Game Protectors Henry Rodeghiero and Raymond Doersbacher aided in the drainage work.

Included in the haul were 1,000 sunfish, ranging from 3 to 7 inches; 500 catfish from 3 to 8 inches, 300 perch from 1 to 12 inches; 250 shiners from 1½ to 7 inches and many polliwogs.

Mr. Opachinski reported that the sportsmen are expected to haul more fish from the pond before the drainage work is completed.

Clinton County Fish & Game Assn.

The Association held a dinner the week before the opening of trout season at which 21 members who had sold 50 or more memberships in the club were the guests of honor. The increase in the cost of the memberships in conjunction with other factors has considerably slowed down the membership drive so that by that date the membership was less than half of the more than 4,500 who held memberships last year.

Louis S. Winner a member of the Pa. Fish Commission, spoke on the changed restrictions on the Right Branch of Youngwomans Creek.

R. P. Tanner, superintendent of the Federal Fish Hatchery at Lamar, was present and spoke.

This club is sponsoring a boy at the Conservation Camp this summer.

KisKi Township Sportsmen's Assn.

Officers of the Association at Avonmore are listed as: Carl A. White, president; Glenn King, vice-president; Larry Laurenti, secretary; and Arthur M. Lockhart, treasurer.

North-Central Division—F. S. C.

Things are popping in the North Central Division, especially in membership growth. A bulletin dated April 10 reports that the membership has increased from 8,478 to 17,873 and that it would no doubt go to 20,000 this year. They are aiming at 25,000 members in 1959. Seventeen new clubs have recently joined the Division organization.

Consolidated Sportsmen of Lycoming Co.

The Club has authorized the purchase of a wire recorder for use in club promotional work. The apparatus will get its first use as an aid in the showing of movies of junior sportsmen's activities in the various high schools of the area.

It is planned to hold the annual picnic at the Sportsmen's Memorial Grounds on the last Wednesday in July and on the following Saturday. That will be July 27th and 30th. The work of improving this fine piece of property is progressing steadily. The drive ways have been recently surfaced with limestone.

Carbon County Sportsmen's Assn.

Crippled children at Camp Daddy Allen, Hickory Run, will be able to add fishing to their outdoor activities this summer. Meeting in Lansford recently the association voted to stock a pool with fish for the sport of the handicapped children.

Peter Murray, Beaver Meadows, was elected president; Walter Shemansky, Tresskow, vice president; George Fogelman, Palmerton, secretary and Theodore Koehler, Weatherly, treasurer.

West Chester Fish & Game Assn.

The Executive Committee unanimously endorsed a contribution of $20.00 to the Conservation Workshop Advisory Committee in recognition of the fine work that this group is doing.

Daniel Boone Rod & Gun Club

8,000 fingerling brown trout for nursery pond were received from Lamar, Pa. State Hatchery. The club hauled them in milk cans. Don Haggerty, Joe Sweeney, Bob Mock, Harry Heath, Del Newman, John Stout, Gordon Fox and three other club members constructed a 40 foot long trough for receiving and rearing the trout.

Columbia County Federated Sportsmen

The Columbia County Federated Sportsmen are cooperating to the fullest extent in the "Boy Scout Fish Derby" and arrangements are being made to award prizes for all types of fish. The contest is set to coincide with the National Fish Derby. The Federated Sportsmen are also planning a number of Farm Fish Pond stocking programs. These ponds will be set aside for the exclusive use of children. Committees have been appointed to plan for stream improvement work which will be undertaken as soon as the streams are low enough to make the work feasible.

2,500 Catfish Released by Clubs

A shipment of 2,500 catfish were recently released in five favorite fishing spots in Berks County. Daniel Boone Rod and Gun Club members released 600 in Carsonia Lake and 400 in Lake Antietam; the Izaak Walton League put 500 in Bernhart's Reservoir; the Mohnton Fish and Game Protective Association released 500 in Angelica Dam, and the Womelsdorf Rod and Gun Club put 500 in Charming Forge Dam.

The catties were put in Charming Forge Dam because so far they have not been affected by pollution which is cleaning out this beautiful stretch of stream of much of its fish life.

Fish Warden, Bill Wounderly stated these catfish, received from the Torresdale holding ponds near Philadelphia were the nicest received in 26 years. Many of them weighed more than a pound.

Perkiomen Valley Sportsmen's Assn.

Willard Townsend, chairman of the Fish Committee, reports that a nice lot of some 2100 catfish were stocked in the Towamencin and Skippack Creeks on May 17. The PVSA members who assisted in the work met the truck from the State Hatchery, and Warden Harry Z. Cole, at Kulpsville, from where they proceeded to streams in that section for the planting.

Morrisville Fish & Game Protective Assn.

The Association will conduct a fishing contest for the 1949 fishing season. Trophys have been donated by George Case, well known Trenton sportsman and will be contested for the following class: (1) The largest trout caught in the open waters of Pennsylvania; (2) The largest bass caught in the open waters of Pennsylvania; and (3) The largest edible game fish caught on the New Jersey Coast. Certified members of the Association are eligible to participate in this contest and it will be necessary to present a sworn statement showing the weight, girth and length of the fish so caught.

Lackawanna County Fed. Sportsmen's Clubs

Persons 12 years of age are now eligible for membership in the Lackawanna County Federation of Sportsmen's clubs, according to a motion passed during a recent meeting of the group at the Scranton Chamber of Commerce building. The organization, as reported by Secretary Frank Galonis, has also made provisions to send three boys to the Junior Conservation camp as conducted by the State Federation. Lackawanna officials are also willing to sponsor a fourth if the other quotas in the division are not filled.

Chosen for Conservation Camp

Russ Buggey, Jr., and Sam Magowan, Jr., have been selected to go to the Junior Conservation Camp, August 3 to 13, near Penna. State College. They will, in a sense, be the representatives from the Southeastern and South Central divisions of the Penna. Federation of Sportsmen's Clubs. Mrs. Ellen Dietrich is in charge of the Southeastern, while Mr. Charles Allen has the South Central. Each division is sending approximately 25 boys who will be trained for firearm safety, trapping, fishing, soil conservation, wildlife research and stream pollution.

Holmesburg was the only club to have two boys selected through their qualifications; this is quite an honor for the club, reflecting its prestige and activities.

Camp Director for the course is Mr. Charles Ridenour, instructor of Physical Education and Athletics at the Penna State College.

Holmesburg Fish & Game Protective Assn.

Sunday, October 2nd is the date set for the Annual Fall Outing of the Holmesburg Fish & Game Assn., with rain date set for October 9th. Prizes will be awarded to all lucky participants in the various affairs planned for that day. In addition a Grand Prize drawing will be held and prizes will be awarded. Friends, relatives and neighbors of all members are cordially invited and ample parking facilities will be provided.

Beaver Falls Sportsmen's Assn.

A lease was signed recently giving the Beaver Falls Sportsmen's Association long-term rental on the A. W. Carnegie farm. These grounds will be for the sole use of members only. This picturesque farm, with a nice stream of water, is ideally located a short distance west of Beaver Falls off the Wallace Run road. The officers and members hold forth high ideals for its development, hoping to make this one of the finer Sportsmen's clubs in the state. Already they are busy getting the place in shape. The barn is to be turned into a club house, a dam will be constructed to form a casting lake, traps will be set up for Skeet and trap shooting and a rifle range constructed together with a picnic grove.

South Buffalo Sportsmen's Club

Members of the Club are working daily on the construction of a large fish pond on their 55-acre tract of land near McVille. It is hoped that the pond, which will measure 100 x 200 feet, will be completed this summer. There are now 240 members in the organization which is three years old. Officers are: A. Brink, president; Mack Carr, vice-president; Leslie Woods, secretary; Sidney Arnold, treasurer.

Western Clinton Sportsmen's Assn.

A considerable number of trout will be placed in prepared ponds and raised to fingerling size for fall planting. Sentiment seems to be growing in favor of setting aside a section of a trout stream near Renovo for the exclusive use of children.

Federal Aid in Fisheries Restoration Bill Proposed

A Bill which will do for the fisheries of the states what the Pittman-Robertson Act already has done for wildlife has been introduced in the House by Representative John D. Dingell of Michigan, the Wildlife Management Institute reports.

The Bill (H. R. 1746) authorizes the Secretary of the Interior to cooperate with state fish and game departments in fish restoration and management projects. To be eligible for aid, a state must have laws governing conservation of fish, and must not divert license fees paid by fishermen to any other purpose than administration of the state fish and game department. Projects covered by the Act relate to the restoration and management of all species of fish, in salt or fresh water, having material value for sport and recreation.

To carry out the purpose of the Act, an amount would be appropriated equal to the revenue accruing from the excise tax imposed by section 3406 of the Internal Revenue Code on rods, creels, reels, and artificial lures, baits and flies for the fiscal year ending June 30, 1947, and each fiscal year thereafter. No more than 8 per cent of each annual appropriation would go for the expenses of investigations, administration, and execution of the Act, and the remainer would be apportioned among the various states.

Apportionment is based on the following formula: 40 per cent in the ratio that the state bears to the total area of the United States, and 60 per cent in the ratio that the number of paid fishing licenses bears to the total of all states. Where the apportionment to a state under the Act is less than $4,500 annually, the Secretary of the Interior may allocate not more than $4,500 to said state when the state certifies that it has set aside not less than $1,500 from its fish and game funds. Alaska, Hawaii, Puerto Rico, and the Virgin Islands would receive proportionate funds.

This Bill is actually a long-delayed companion proposal for state fishery restoration projects. It has been referred to the House Committee on Merchant Marine and Fisheries.

Ten Rules for Fishermen

1. Buy a fishing license.
2. Obey the laws.
3. Report all violations.
4. Cooperate with conservation officials.
5. Save small fish and return fish about to spawn.
6. Don't be a hog—leave some for the other fellow.
7. Respect private property, close gates, don't break down fences, don't leave rubbish along the streams.
8. Avoid accidents.
9. Respect the rights of your fellow sportsman.
10. Be a real sportsman—don't complain or brag about your luck.



Beautiful pool on Cowanesque River in Tioga County.

Pennsylvania's Streams

I've caught fish in many places,
And though some may highly rate,
I've still to find a better stream,
Than in our own great state.

I've trolled for tuna off the capes,
And fought a shark or two,
Had a run-in with a stingaree,
And gaffed a fighting blue.

I've worked the bays for stripers,
And foiled the channel bass,
I've cast up North plugged down South,
And left no chances pass.

Tried most all Western waterways,
And Eastern streams galore,
But when it comes to fishing,
There's but one state I adore.

There's where I seek enjoyment,
Where the streams are swift and wide,
Where the sturdy bass are waiting,
And the wily trout still hide.

Oh, I'm sure to find more pleasure,
Be it early spring or late,
In our own great fishing playground,
The good old Keystone State.

G. Earle Thompson.

Check List Still Available

A limited supply of the excellent reference booklet, "A List of Common and Scientific Names of Better Known Fishes of the United States and Canada" still is available. The result of over 15 years of research by a panel of the nation's foremost fishery experts, this booklet, published by the American Fisheries Society, covers 571 species of American fish and is completely indexed. Fishery students, anglers, and biologists will find it invaluable. Copies may be obtained for 25 cents from Dr. William Beckman, Museums Annex, Ann Arbor, Michigan.

Warden Cross Reports:

The biggest trout caught in Clinton Co. so far is a brown trout 25 inches long weight 5 lbs. 4 ozs. caught by Buck Walizer, of North Bend, Pa. on Youngwomans Creek, on a dry fly. Buck claims that he was 35 minutes landing the big fellow.

Common Sense in Trout Stocking

By Louis W. Stevenson

THIS story begins in a parking lot near a post office in a small town in northern Pennsylvania. A large truck, with several large tanks on it and bearing Federal License Plates is parked in the lot. Surrounding the truck are several small pick-up trucks loaded with empty milk cans. The men who accompanied the smaller trucks are busy transferring fingerling trout from the tanks on the Federal truck to the milk cans. The scene could be duplicated in nearly every county in Pennsylvania and in many states in the U. S. A.

The trout that the men are transferring to the milk cans could have been raised in any one of several Federal Hatcheries. Sportsmen's Clubs, whose representatives were present, obtaining the trout, had applied to the U. S. Fish and Wildlife Service for trout to stock streams in the areas in which the clubs were interested, and after passing through various channels the applications had been approved and the fish were being delivered.

The trout were healthy, three to five inches long, brook and rainbow trout. In the special tanks in which they were transported there had been no loss. The water was agitated, iced before leaving the hatchery, the tanks were clean. With such proper precautions there naturally should be no loss.

I wish that the story could be continued thusly: The men filled the cans, hurried to approved streams, released the trout under satisfactory conditions where they grew to legal size and were a great contribution to the fish supply on our streams. Unfortunately, such was not the case.

The true picture of what happened here and elsewhere is very likely to be of an entirely different nature. What really did happen? Here are some typical examples:

The milk cans into which the trout were being dumped had been obtained from farmers or from milk plants. Some had been thoroughly cleansed, others had some stale milk, a residue from the last time they were put to their intended use, remaining on the inside. Others bore traces of strong disinfectant that had been used at a milk plant and which had not been thoroughly rinsed out of them. The minute the trout were transferred to these unclean cans they became sick. No, none of them floated belly up, that could come later, but they were breaking the surface of the water, they didn't like their new unclean home.

The job of transferring the trout to the cans was finally completed and the trucks departed for the various streams in which the trout were to be stocked. In some instances the streams were nearby and the water in the cans did not have time to reach a temperature above which the trout could not live. Other trucks had longer distances to travel, fifteen, twenty, thirty or forty miles. Some of the trucks travelling the longer distances had them who realized the danger of high temperature water and stopped and placed chunks of ice in the cans, or added cool spring water. Other trucks, however, did not stop and soon an observer could have seen trout floating belly up, others feebly swimming or floating listlessly in the tepid water. Eventually all the trucks reached their intended destination.

The first truck had traveled but a few miles, the water in the can was still cold, trout in good condition. The cans were carried to a likely looking pool and the trout dumped into the stream. Now what was wrong? The trout lay in the stream in a school, barely moving, a moment before they had been darting around in the can, full of life. There had, unfortunately, been no tempering of the water, in which the trout were carried before dumping them into the stream. Temperature of the water in the cans had been 45 degrees, that in the stream was 65 degrees. -The trout could not take the sudden temperature change.

Another truck traveled for a longer

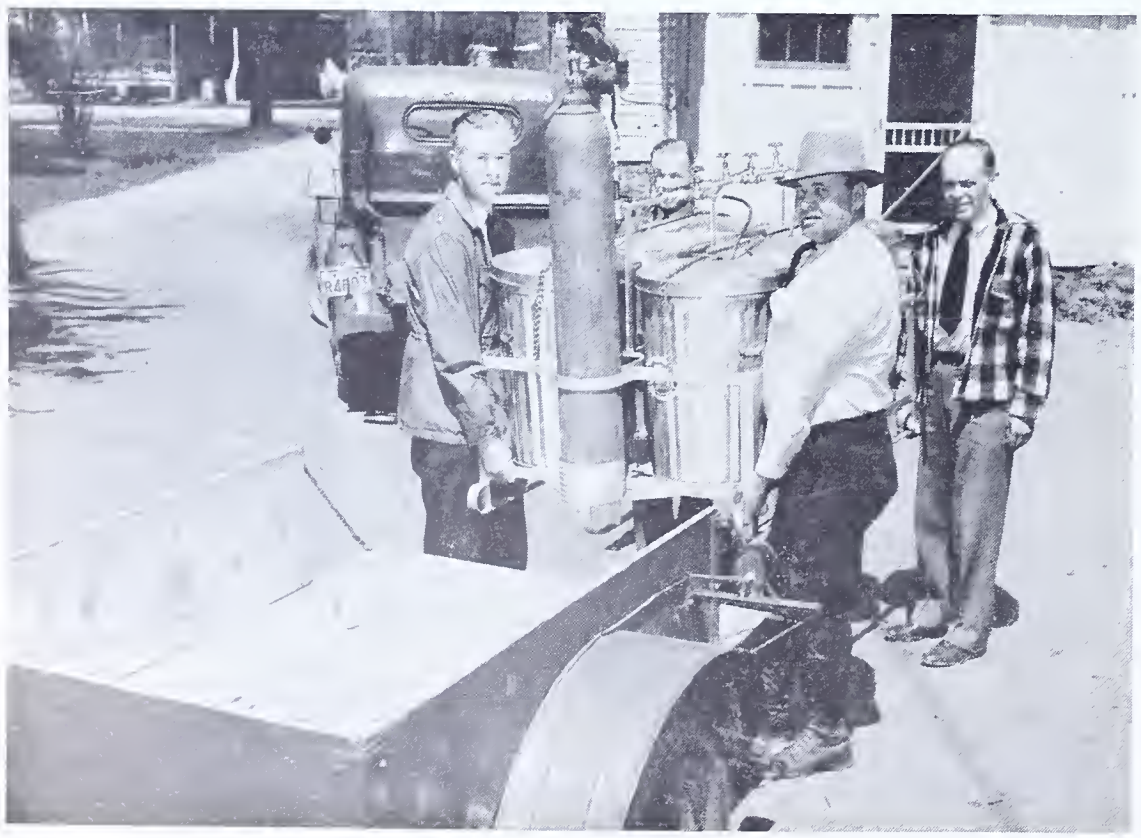
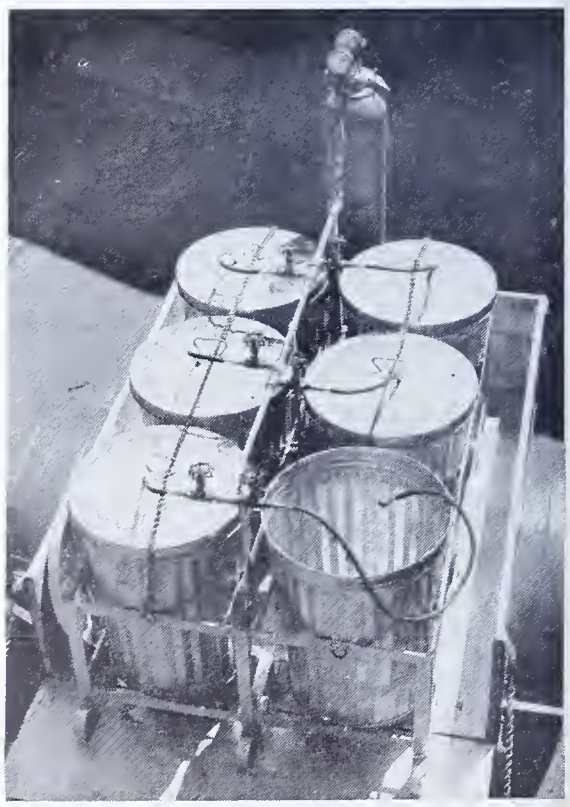


Photo shows how easily the complete unit can be picked up and placed in either a trailer or small truck. Men in the photo are, left to right, front: Kermit Moore, Leland Cloos; in the rear: Charles Yahn and Louis Stevenson.



This photo is sufficient in detail to enable any club to build a like outfit. Note the small ball on the end of the oxygen hose. This is a carborundum stone furnished by the Carborundum Co. of Niagara Falls, N. Y., and is used to break up the bubbles of oxygen so that it is absorbed by the water. Note further that shut-off valves enable use of either one or more cans without difficulty.

distance. The water had been iced but the temperature had crept up to 68 degrees, still the trout were O.K. the dumping procedure of above was duplicated. Again the fish reacted in an unnatural manner. This time however the trout were dumped from water of 68 degrees into water of 50 degrees, again too sudden a change.

A third truck came to a halt beside another stream. This latter stream was not on the list of streams approved by the State for fish stocking. Temperatures during the low water periods rose as high as 85 degrees. Occasionally pollution entered the stream from various sources, industrial, sawmills, etc. However, the men on this truck knew how to get around the State Fish Commissions objections to stocking the stream. They had applied for trout to stock another stream that was on the approved list, they had obtained the fish and now they would show the Fish Commission that they too knew something about the streams in their own county. Here again, the trout were released in the stream and tomorrow every one of them would be floating dead, miles below the stocking point, that is those that had not already been eaten by water snakes, kingfishers, crofs, etc. who easily caught them as they slowly swam in the warm, polluted water.

Thousands upon thousands of strong, healthy trout leave the hatcheries every year and in many, many cases come to an untimely end under conditions identical with those that are described herein. These trout, if properly handled, would mean a great help to our trout fishing that is taking such a beating from the hundreds of thousands of fishermen, who visit our streams every year.

It should be the obligation of every group of sportsmen or every sportsmen's club, who intend to apply for and stock federal fingerling trout, to find out the proper manner in which to carry out such stocking.

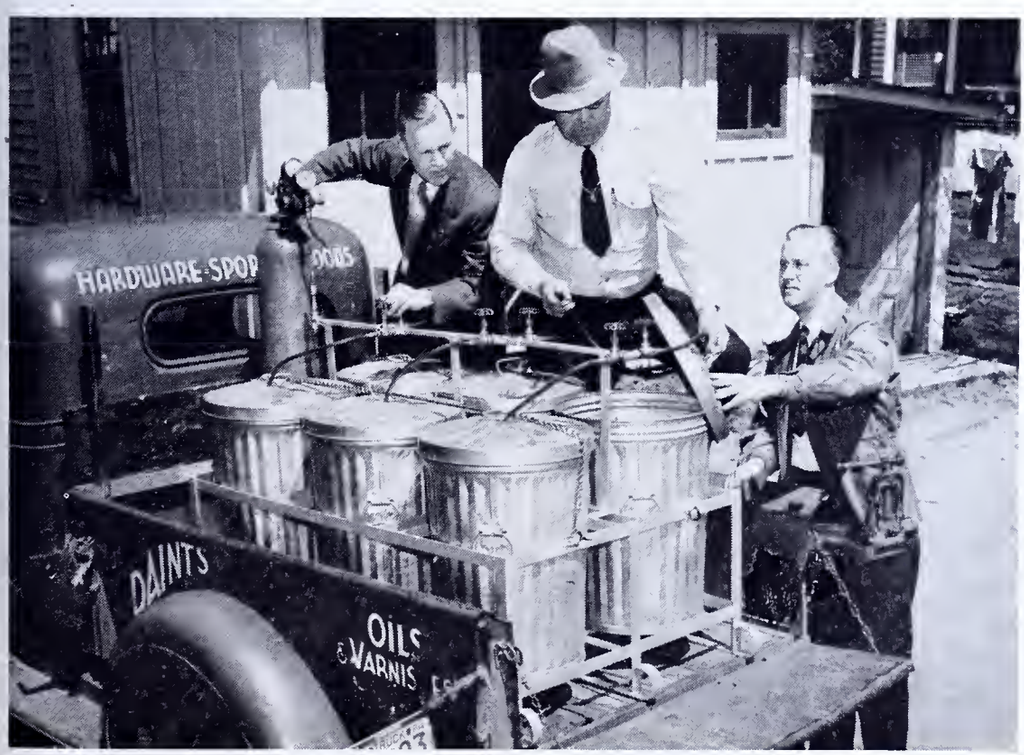
The writer knows of one club that has purchased tanks, oxygen, etc., and has built a fine outfit for the distribution of trout. They can be carried for several hours in the tanks without suffering any damage whatsoever. The cost of the outfit is approximately $100. A full description of the stocking equipment is given with the accompanying photographs.

Other clubs contact their local Fish Warden and definitely determine from him if the waters they propose to stock are suitable. If he gives a negative reply they devote their efforts toward stocking streams where the trout will have a chance. Men from these same clubs carry a thermometer with them. They take the temperature of the water into which the trout are to be released. If the temperature of the water in the cans and the stream differ by more than five degrees they will slowly add stream water to the can until the temperature is nearly equal to that of the stream, then and not until then will they release the trout.

Another important point that must be considered when trout are stocked is the exact point of release of the trout in the stream. Unfortunately most fish arrive during months when streams are at their lowest level. Often small feeder streams in which fingerling trout are stocked have stretches where the streams may flow under ground for short distances during low water periods and movement of fish up and down stream is limited. Others have stream obstructions of other types that interfere with the free movement of the fish. They must spread out over a considerable distance, if many are released, if there is to be reasonable survival and growth. The amount of fish food in a small area is limited. Further, concentration of large numbers of fish in any given area means also a concentration of creatures that prey on the trout, water snakes, raccoons, etc.

The U. S. Fish and Wildlife Service that controls the raising and distribution of Federal fish has working agreements with the various States under which they will only furnish fish for streams that the State has approved as being suitable for the species to be stocked. The approval or disapproval of any stream for stocking purpose has been determined only after a careful stream survey has been made considering all factors, food conditions, water temperature, danger of pollutions, etc. No trout should be placed in any stream unless it definitely is approved for such stocking.

This job of fish propagation is one of common sense application to a few important points. It doesn't take a great deal of "know how", just the determination to do a good job and do it right.



Left to right: Charles Yahn, President of the Nessmuk Rod and Gun Club of Wellsboro; Leland Cloos, Tioga County Fish Warden, and Kermit Moore, Past President of the Club. This photo shows the fish stocking equipment placed on a small pick-up truck.

50-60 Pound Leader Material Now Available for Salt Water Use

The Du Pont Company is producing commercial quantities of nylon monofilament in 50- and 60-pound tests to meet certain requirements in leader material for salt-water sport and commercial fishermen and charter boat-captains.

Availability of monofilament in the heavier diameters will enable all salt-water fishermen, who frequently use 6-, 10- and 15-foot leaders for certain types of fishing, to take advantage of nylon's strength, flexibility, and resistance to rust and kinking.

The new diameters will be found in tackle stores and sporting goods shops all over the country in 10- and 100-yard coils, the company states. This means, it was pointed out, that fishermen now have a choice of continuous length nylon leader material in pound tests ranging from 2 to 60 for all types of fishing.

Fishing tackle manufacturers already are producing ready-to-use trolling and casting leaders in the new 50- and 60-pound tests for striped bass, channel bass, tarpon, sail fish and many other salt water gamesters. Snelled hooks in the heavy pound tests also are available.

New Laws Enacted by '49 Legislature and Recently Signed Into Law by Governor Duff

The following are the only bills concerning fishing which passed both the House and the Senate and were signed by the Governor, together with their effective date and act number:

House Bills

No. 533—This bill was introduced by Representative Tompkins of Cameron County and provides that certain costs are to be paid by the Board of Fish Commissioners including $1.00 per day board for persons committed to jail. This bill is known as Act 120, signed April 18, 1949, becoming effective Sept. 1, 1949.

No. 793—This bill was introduced by Messrs. Kline and Watkins of Schuylkill County and provides that terrapin can be taken on Sunday. This bill is known as Act 110, signed April 18, 1949, becoming effective September 1, 1949.

No. 828—This bill was introduced by Messrs. Goodling of York, Shoemaker of Schuylkill, Elder of Lycoming and Yeter of Berks Counties, and changes the method of computing payments in lieu of devices at dams to enable fish to migrate by amending Section 185 of the Fish Law increasing the maximum amount payable from $4,000 to $6,500 per annum. This bill is known as Act 135, signed April 20, 1949, becoming effective September 1, 1949.

No. 982—This bill was introduced by Messrs. Goodling of York and Shoemaker of Schuylkill Counties and changes the Administrative Code by setting up a Pennsylvania Fish Commission instead of the Board of Fish Commissioners, and provides for an Executive Director, etc. This bill is known as Act 180, signed April 25, 1949, becoming effective immediately.

No. 1192—This bill was introduced by Messrs. Goodling of York and Shoemaker of Schuylkill Counties, and provides there shall be no fishing between the fourteenth day of March and five o'clock antemeridian on the fifteenth day of April in any year except in rivers, ponds, and lakes not stocked with trout, and in streams emptying into Lake Erie within the confines of Pennsylvania from the mouth of the stream in a southerly direction to State Highway Route No. 5, a distance of approximately one-half mile. This is known as Act 65, signed April 13, 1949, becoming effective September 1, 1949.

Senate Bills

No. 55—This bill was introduced by Senator Wolfe of Union County, and provides for a minnow trap which shall have two openings one inch in diameter instead of one. This bill is known as Act 4, signed February 16, 1949, becoming effective September 1, 1949.

No. 475—This bill was introduced by Senator Robinson of Susquehanna County, and is an Act making an appropriation from the Fish Fund to the State Employe's Retirement Board. This Act is known as Act 37A, signed May 19, 1949.

No. 476—This bill was introduced by Senator Crowe of Monroe County, and is an Act making appropriations to the Treasury Department out of various funds, to pay replacement checks and adjust errors. This Act is known as Act 38A, signed May 19, 1949.

No. 657—This bill was introduced by Senator Wolfe of Union County, and provides that Pennsylvania may enter into a contract with the coastal states to assist in the regulation of specific fisheries in which they have a common interest, etc. This bill is known as Act 260, signed May 9, 1949, becoming effective immediately.

No. 786—This bill was introduced by Senator Wolfe of Union County, and is an Act for the protection and conservation of shad in the Delaware River and Bay and their tributaries by regulating the take or catch thereof. This Act is known as Act 366, signed May 11, 1949, and becoming effective December 1, 1949.

What's New in Fishing Books

Reviewed by Hugh Johnson

Occasionally a non-fisherman gets into my den, looks aghast at the shelves of fishing books and says "What! All those books just about *fishing!*" If he continues to gasp I carefully explain that I don't by a long shot, buy all the fishing books that are published, and that fish and fishing are a very large subject comprising many different categories, each with a literature of its own. For example, three new books published during the last few months:

The Light Touch Category

In *Calling All Fly-Fishers* (David McKay, South Washington Square, Phila. 5, Pa., $2.00) Alan D'Egville, the author, kids the pants off fly fishermen and takes them and their quaint habits for a merry frolic—but he does it with a sort of loving hand because he is obviously a fly fisherman himself. Example of the D'Egville humor (in his essay on the importance of disguise and camouflage in approaching a trout stream): "To attempt to disguise oneself as a cow or a tree, laudable as it may be, is found to be impracticable. A man dressed as a cow is always liable to have a little trouble with the odd bull, and it is somewhat embarrassing to have to explain things to a milkmaid. It is difficult, too, when disguised as a tree, to get through gaps in hedges, climb trees and avoid being perched on by short-sighted birds who have not been thoroughly house-trained." Well, there it is. You won't learn anything about fly fishing but you may get some laughs from it, particularly from the cartoon drawings which seem to me to point up the idiosyncrasies of fly fishermen much more cuttingly and humorously than does the text.

The Scientific Category

The Ways of Fishes by Leonard P. Schultz and Edith M. Stern (D. Van Nostrand Co., Inc., 250 Fourth Avenue, New York 3, N. Y., $4.00) is a complete picture, for the layman, of the kinds of fishes, why fishes behave as they do, their feeding and breeding habits, their contribution to the world of man and nature. There is not as much emphasis on material of particular interest to the sports angler in this book as there is in *The Life Story of the Fish* by Brian Curtis (reviewed in the April ANGLER), but *The Ways of Fishes* is more readable and the treatment of the many unbelievably queer kinds of fish life reads like something from *Weird Tales*. In fact, some of it makes your hair stand on end—such as the story of the candiru, a tiny South American catfish (with the dubious distinction of being the only vertebrate parasite of man) who wiggles his way *inside* a human body, in the most disgusting fashion imaginable, and wreaks unspeakable damage. The illustrations are superb and the book is altogether a splendid buy for the man who wants to know more about the fish world than the number of trout remaining in his favorite pool in July.

The Easy Chair Category

The Great Outdoors: The Where, When, and How of Hunting and Fishing, edited by Joe Godfrey, Jr. and Frank Dufresne (Whittlesey House, 330 W. 42nd St., New York 18, N. Y., $6.50). This big book of twenty-four instructive, entertaining articles by nationally know hunters and fishermen, was privately printed a few years ago in deluxe leather binding and bore a price tag of $15.00. It was good enough to sell out at that price and now it is reissued for less than half the original price. It has everything that the earlier edition had and the binding, although not leather, is handsome and just as strong. There are 16 pages in full color illustrating game fish, birds, and animals of North America; over 65 photographic illustrations of fishing and hunting in action; a dictionary of sportsmen's terms; tables of fish and game records; and a map of the major waterfowl flyways of North America. All this—in addition to the 24 articles by such top flight people as Lee Wulff, John Alden Knight, Ray Holland, Nash Buckingham, Ollie Rodman, Ben East, Lou Caine, etc. It's worth the price.

Violators! Please Note

In 1948 to and including April 30th, fish wardens made 224 arrests, collected $7,296.00 in fines, lost 3 cases and gave out 41 days in jail.

In 1949 to and including April 30th, they made 263 arrests, collected $6,775.00 in fines, lost one case and gave out 1,605 days in jail, one case appealed.

Therefore, they are ahead in '49 by 39 arrests. Behind in fines by $521.00. 1,564 days in jail ahead.

There may be a few cases pending for the first four months of this year of which we have no record in the office.

The Amoebas

By Carsten Ahrens

The Amoebas are surely examples of the statement that the meek inherit the earth. The free-living species are found in all earth's waters, from the ocean to mountain-top lakes. The parasitic species frequent the intestines of many animals. They are so numerous that thousands of individuals may be found in a single cup of water. Yet they cannot swim. They lack limbs, mouth and alementary canal, gills or lungs. They reproduce by simple cell division.

All of them are extremely minute, the largest being about 3/5 of a millimeter in length.

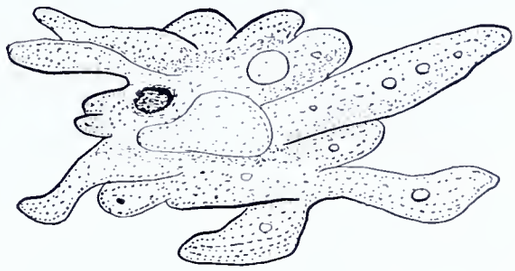
The majority of the Amoebas are nakid, jelly-like droplets of protoplasm. The "jelly" is transparent about the margin of the creature but becomes less so toward the center. Usually in the middle there is a dark area, called the nucleus, which seems to control the activities of the one-celled animal.

Now although the Amoeba cannot swim, it does have locomotion. The animal can thrust out a finger-like projection in any direction it chooses. Such a temporary protrusion is called a pseudopod, a false foot. When the animal has pushed out a pseudopod, the protoplasm flows into the new part, the elastic cell membrane adjusts itself accordingly, and movement has been accomplished. Often a number of pseudopods are sent out in a number of directions. Sometimes a projection is pushed out north and another to the south, and the animal seems to stretch almost to the breaking point. Then it apparently makes up its nucleus where it should go . . . and goes.

Most aquatic creatures have gills for oxygen getting. A few have lungs, so they must make trips at regular intervals to the surface for the vital element. But as the Amoeba oozes along, it acquires oxygen through its cell membrane by osmosis and rids itself of carbon dioxide in the same way.

Its table manners are something to behold. The animal has no eyes, hands, mouth, or digestive system, and yet it eats, digests, and eliminates wastes. Its food usually concists of algae or bacteria, occasionally another protozoa. When some tropism advises the Amoeba that nourishment lies ahead, the creature sends out two pseudopods that travel forward and flow around the desired titbit. Since there is no mouth, any part of the outer membrane may be the point of ingestion, and after digestion, any part may be the point of excretion!

Love life for the Amoebas doesn't exist. If your lens shows a big Amoeba apparently sizing up a slender, graceful member, it can't be love. More likely, one may be about to encircle and devour the other. The animals lack sex. When an Amoeba becomes mature, the nucleus splits. Then the entire animal divides, each part taking half the nucleus. The Amoeba loses its identity and becomes two daughter cells . . . these two



become four . . . the four, eight . . . the eight, etc. Apparently this goes on endlessly, monotonously, immortally.

To restore the waterproofing of waders, thin rubber tire solution with a little gasoline and apply two coats. Waders should, of course, first be thoroughly cleaned of all grease, dirt, etc., which can be accomplished with gasoline on a clean rag.

A split-bamboo salt water rod when warped can be straightened by heating it gently over an open flame and flexing it in the opposite direction until the warp has been rectified. However, as this is a delicate operation, it is not suggested for those who know little or nothing of the peculiarities of split bomboo.

Method For Untwisting Line

Fishlines that are carefully untwisted each time they have been used give long life and fewer backlashes. There are many ways to straighten out twisted lines, such as trolling them behind the boat, or trail them along the grass, but these methods have several drawbacks and do not straighten the line as well as the professional method here described.

The end of the line is tied to a support, which should be about waist high. The line is held in the right hand at about a foot from the reel or spool. In this way, the reel, or spool, with its click on, swings freely, acting as a bob, and by walking slowly backward, paying out a bit of line with each step, it will twist about in the direction opposite the twist that may be in the line. When the reel stops turning, the twist in the line between the hand and the spool is removed.

Then, by sliding the fingers down to the reel, two more feet of line are pulled off and the same procedure is followed.

It is important that the process is accomplished in small steps—not over two feet between the reel and the hand.

It takes only a few minutes to straighten out a line by this method and little room is actually needed. By following the procedure each time a line has been used, long life and fine performance is assured.—O. B.C.A.

Wife: "Believe me, there's better fish in the ocean than the one I caught."

Husband: "There's better bait, too!"

STREAM-SIDE LIFE

Pickerelweed and Burreed

By Robert Leo Smith

Along the edges of ponds, lakes, marshes and quiet stretches of streams, where the mucky soil is building up to form a new shoreline, grows a variety of plants. Foremost among these plant invaders of the watery areas is the pickerelweed, *Pontederia cordata,* growing from one to three feet high. Familiar to many anglers, especially those who fish for bass, the pickerelweed is quickly identified by large solitary, heart-shaped leaves with hounded bases, and the spikes of violet-blue flowers that bloom from June to October. The individual flowers on the spike are funnel-shaped and two-lipped. The anthers—the enlarged tips of the stamens in which the pollen is formed —are so placed that no insect can enter the flower without brushing against them and carrying some of the pollen away. Damselflys and dragonflys are common about the pickerelweed. The nymphs of these insects like to climb up the thick stems to shed their skins; and the adults find that the submerged portions of the stems are excellent places to lay their eggs.

Closely associated with the pickerelweed is the giant burreed *Sparganium eurycarpum* which has ribbon-like leaves three to six feet high. In June and July the flower heads appear. The fluffy staminate or male flowers and the pistillate flowers both are borne on the same plant, the former being produced somewhat above the female flower heads. The flowers are followed by green burs of closely packed wedge-shaped nutlets, which are relished by wild ducks.



Pennsylvania Fish Law Violations

Cases Settled During the Month of May 1949

Allegheny County

Babmo, William, 500 S. Main St., Zelienople, Pa. Violating rules and regulations $20.00

Chapman, William S., 97 Briggs St., Pittsburgh 7, Pa. Exceeding creel limit 20.00

Conlogue, George S., 2123 Duquesne Ave., McKeesport, Pa. Fishing in Nursery Stream 100.00

Falco, Salvadore, 206 Paulson Ave., Pittsburgh 16, Pa. Exceeding creel limit 20.00

Hendrickson, Edwin J., R. D. No. 5, Large, Pa. Exceeding creel limit .. 10.00

Movic, Peter, 2410 Riverview Ave., McKeesport, Pa. Fishing in Nursery Stream 100.00

Stark, Ned W., Large, Pa. Exceeding creel limit 10.00

Stitz, Oliver, Maple St., Swissvale, Pa. One illegal brook trout 10.00

Ullon, George T., R. D. No. 2, McKeesport, Pa. Exceeding creel limit 10.00

Wassick, S. J., 503 Sterner St., Pittsburgh 27, Pa. Eight illegal brook trout 80.00
One trout over limit 10.00

Armstrong County

Good, W. J., Jr., 616 Woodward Ave., Kittanning, Pa. Illegal operation of motor boat 10.00

Shoffner, John R., 318 Allegheny Ave., Kittanning, Pa. Illegal operation of motor boat 10.00

Steim, John L., 740 Woodward Ave., Kittanning, Pa. Illegal operation of motor boat 10.00

Blair County

Miller, Charles W., 1517 5th St., Juniata, Pa. One illegal brook trout .. 10.00

Myers, Reuben H., 1505 Allegheny St. Hollidaysburg, Pa. Two illegal trout 20.00

Stevens, Alfred C., 1500 Allegheny St., Holidaysburg, Pa. Two illegal trout 20.00

Bradford County

Kesson, Ray, Ulster, Pa. Exceeding creel limit 10.00

Wolfe, Gerald, R. D. No. 2, Columbia Cross Roads, Pa. Exceeding creel limit 10.00

Butler County

Freeman, Frank F., 239-2nd St., Butler, Pa. Illegal operation of motor boat 10.00

Cambria County

Albright, Gerald F., Box 413 Beach Ave., Patton, Pa. One illegal trout 10.00

Cangioli, Aldo, Colver, Pa. Four illegal trout 40.00

Drushel, Lewis P., R. D. 2, Evans City, Pa. Violation of Rules and Regulations 20.00

Dull, Roy, 829 Park Ave., Johnstown, Pa. Exceeding creel limit 20.00

Luczko, Thomas R., 417½ Napoleon St., Johnstown, Pa. Fishing without a license 25.00

McIlnay, Charles V., Johnstown, Pa. Three illegal trout 30.00

Sherry, Clair, James Ave., Patton, Pa. One illegal trout 10.00

Turnbull, Thomas, 117 Rose St., Johnstown, Pa. One illegal trout 10.00

Cameron County

Petrazio, Eric W., 512 E. Allegheny Ave., Emporium, Pa. One illegal trout 10.00

Carbon County

Kern, Claude, 346 S. 2nd St., Lehighton, Pa. Exceeding creel limit 30.00

Magagna, Lester, 230 Allen St., West Hazleton, Pa. Taking trout less than 9" and having 4 of them in his possession. (Slate Run) 60.00
Violation of Rule No. 3 on Slate Run. More than one hook attached to his line (Special fishing regulations) 20.00

Magagna, Joseph L., W. Hazleton, Pa. Violation of Rule No. 5 on Slate Run. Possession of trout less than 9 inches (Special fishing regulations) 20.00

Reabald, Robert, 144 S. 2nd St., Lehighton, Pa. Exceeding creel limit .. 10.00

Rohlfing, Kenneth W., 346 S. 2nd St., Lehighton, Pa. Exceeding creel limit 10.00

Centre County

Johnson, Malcolm, Monument, Pa. Two illegal trout 20.00

Jonosky, John, Grass Flats, Pa. Violation of the rules and regulations .. 20.00

Nadzon, Joseph, Grass Flats, Pa. Violation of the rules and regulations .. 20.00

McCalip, David, State College, Pa. Wading in restricted waters of Spring Creek, Bass Project 20.00

Waltz, John A., R. D. 2, Howard, Pa. One illegal trout 10.00



Roger Reto of Pen Argyl and a large mouth bass he caught the past season. The bass was 22½ inches long and weighed 6¼ pounds. The catch was made on a fly rod using a bass bug. We hereby nominate Roger for the championship of the 11 year old class.

Clearfield County

Wiley, Enlo C., R. D., Mahaffey, Pa. Fishing without a license 25.00

Witherson, Ben H., 227 Maple Ave., DuBois, Pa. Violation of the rules and regulations 20.00

Clinton County

Martin, Andrew F., 5 E. Park St., Lock Haven, Pa. Violation of the rules and regulations 20.00

Crawford County

Lenord, Elwin, R. F. D. 2, Centerville, Pa. Possession of game fish in closed season 10.00

Cumberland County

Heck, David, 210 4th St., West Fairview, Pa. Fishing a posted stream on Sunday 25.00

Heck, George H., 210 4th St., West Fairview, Pa. Fishing a posted stream on Sunday 25.00

Dauphin County

Fanus, Daniel, 191 N. 15th St., Harrisburg, Pa. Fishing in a stream closed for 5 days for stocking 25.00

Fanus, Elizabeth E., 191 N. 15th St., Harrisburg, Pa. Fishing in a stream closed for 5 days for stocking 25.00

Mayfield, Ermon P., 306 Main St., Steelton, Pa. Fishing in a stream closed for 5 days for stocking 25.00

Elk County

Auman, Ambrose J., 446 Church St., St. Marys, Pa. One illegal brown trout 10.00

Haberberger, Fred., 137 Neubert St., St. Marys, Pa. Two brook trout .. 20.00

Hauber, Vincent S., 479 Chestnut St., St. Marys, Pa. One illegal brook trout 10.00

Maze, Luther, Jr., Wilcox, Pa. Twelve illegal trout 120.00

Erie County

Mitchell, Dr. C. D., 1007 Chelsa Ave., Erie, Pa. Three illegal trout 30.00

Mitchell, Robert E., 3024 Marvin Ave., Erie, Pa. Three illegal trout 30.00

Riazzi, Florenzo, 830 West 16th St., Erie, Pa. Exceeding creel limit 20.00

Fayette County

Black, Leslie, Box 88, Waltersburg, Pa. Operating a motor boat without license 5.00

Herring, Emmert, Gibbons Glade, Pa. Using illegal device 20.00

Herring, Lindsey, Gibbons Glade, Pa. Fishing without a license 25.00

Franklin County

Christy, Merle, Mercersburg, Pa. Fishing without a license 25.00

Huntingdon County

Angelo, Joseph, Dudley, Pa. Using illegal devices 20.00

Barrick, Jack L., R. D. No. 1, Huntingdon, Pa. One walleye pike in closed season 10.00

Pearce, John, R. D. No. 1, Huntingdon, Pa. One illegal pike 10.00

Indiana County

Fulton, Norman C., R. D. No. 1, Homer City, Pa. Possessing trout in closed season 60.00

Fulton, Robert O., R. D. No. 1, Homer City, Pa. Possessing trout in closed season 60.00

Gardner, William D., Glen Campbell, Pa. One illegal trout 10.00

Howard, Frank, R. D. No. 2, Blairsville, Pa. Two illegal trout 20.00

Walls, Peter C., R. D. No. 1, Homer City, Pa. Possessing trout in closed season 50.00

Jefferson County

McCool, Harry D., R. F. D. No. 1, Sigel, Pa. Two trout in closed season .. 20.00

Snyder, Paul E., R. F. D. No. 2, Reynoldsville, Pa. Fishing without a license 25.00

Stewart, William R., Box 104, Westville, Pa. One trout in closed season 10.00

Lackawanna County

Davis, Roy N., 1120 State St., Archbald, Pa. Exceeding creel limit 10.00

Dreistadt, Mike, 155 Drake Lane, Old Forge, Pa. One pickerel in closed season 10.00

Latorre, Joseph, 1216 Pittston Ave., Scranton, Pa. Wading in restricted waters of Spring Creek Bass Project 20.00

Radesky, John, 313 Hand St., Jessup, Pa. Exceeding creel limit 10.00

Lancaster County

Kreider, Paul, 218 Orchard St., Manheim, Pa. Exceeding creel limit .. 10.00

Lawrence County

Altman, Sam, R. D. No. 2, New Castle, Pa. Exceeding creel limit 70.00

Patterson, Andrew, 811 Blain St., New Castle, Pa. Exceeding creel limit .. 70.00

Lebanon County

Dubb, Richard D., Lebanon, Pa. Killed one trout out of season 10.00

Luzerne County

Brackno, John, 63 S. Empire St., Wilkes-Barre, Pa. Two bass in closed season 20.00

Kalalka, Leo, 744 Lehigh St., Wilkes-Barre, Pa. Exceeding creel limit ... 20.00

Lingousky, Francis, 940 West 4th St., Hazleton, Pa. One illegal brook trout 10.00

Ritter, Clem, 8 Clark St., Hilldale, Pa. One bass in closed season 10.00

Takec, Michael A., 911 N. Locust St., Hazleton, Pa. One bass in closed season 10.00

Yenchi, Peter P., 38 Railroad St., Wilkes-Barre, Pa. One bass in closed season 10.00

Zimmerman, William, 28 Ryan St., Luzerne, Pa. Two illegal trout 20.00

Lycoming County

Kettler, Richard, 2677 Sortman Ave., Duboistown, Pa. Fishing without a license 25.00

Rickolt, Charles, 114 S. Main St., Muncy, Pa. Wading in restricted waters of Spring Creek, Bass Project 20.00

Shearer, Archie W., R. D. No. 2, Jersey Shore, Pa. Exceeding creel limit 10.00

McKean County

Burt, Vernan A., R. D. No. 1, Smethport, Pa. One illegal trout 10.00

Glesk, Cyril M., Catlin Ave., Port Allegheny, Pa. One illegal trout .. 10.00

Moore, Ernest E., Box 113, Anderson St., Mt. Jewett, Pa. One illegal trout 10.00

Montgomery County

Kline, Homer, Pennsburg, Pa. Using illegal devices 20.00

Nettles, Fred R., 826 High St., Pottstown, Pa. Using illegal devices .. 20.00

Mosher, Kenneth, 205 Spring St., West Easton, Pa. Illegal devices 20.00

Perry County

Stahl, Clarence, R. D., Blain, Pa. Possessing two illegal trout on March 30, 1949 ..... 20.00

Potter County

McCloskey, Walter, R. D. No. 1, Austin, Pa. Two illegal trout 20.00

Petrosewitz, Chester J., R. F. D. No. 4, Coudersport, Pa. One illegal trout 10.00

Schuylkill County

Carten, Edward, 114 Rowe St., Tamaqua, Pa. Two small mouth bass in closed season 20.00

Snyder County

Moyer, Frank E., R. D., Beavertown, Pa. Two trout in closed season .. 20.00

Somerset County

Bunk, Thomas, 314 5th St., Windber, Pa. Two illegal trout 20.00

Gnagy, Herbert, 113 Fuller St., Somerset, Pa. Five illegal trout 50.00

Persuhn, Lloyd, R. D. No. 5, Somerset, Pa. Six illegal trout 60.00

Seudek, Edward, 1902 Cambria Ave., Windber, Pa. Exceeding bait fish limit 30.00

Sullivan County

Green, Donald T., Box 7C, Dushore, Pa. One illegal trout 10.00

Minier, Harry E., Laporte, Pa. Exceeding creel limit 50.00

Neuber, Charles, Lopez, Pa. Fishing without a license 25.00

Susquehanna County

Kost, John, Forest City, Pa. Fishing within 200 ft. of Beaver Meadow Pond (State owned) 20.00

Tioga County

Avery, Cora, Elkland, Pa. One illegal brook trout 10.00

Copp, Frank, R. D. No. 3, Wellsboro, Pa. One illegal brook trout 10.00

Warren County

Zeeb, John R., Spring Creek, Pa. Violation rules and regulations. Using live bait in restricted area of Spring Creek 20.00

Washington County

Bruno, John, Richeyville, Pa. Exceeding bait fish limit 50.00

Hoover, Raymond, 74 Brookside Ave., Washington, Pa. Fishing without a license 25.00

Weldon, James W., 160½ Blaine Ave., Washington, Pa. Exceeding creel limit 10.00

Westmoreland County

Baughman, Philip R., Box 188, Greensburg, Pa. One illegal trout 10.00

Beverse, William, 1617 Broad St., Greensburg, Pa. Refused to show license 25.00

Carerelli, John, 1409 Broad St., Greensburg, Pa. Refused to show license 25.00

Snyder, Emerson, R. D. No. 2, Mt. Pleasant, Pa. Exceeding creel limit 10.00

Wyoming County

Sherwood, Foster, Osterhout, Pa. One illegal trout 10.00

York County

Brown Edward D., 513 North George St., York, Pa. Using illegal devices 20.00

Downs, Mrs. Dale, R. D. 1, Brogeville, Pa. Fishing without a license 25.00

Fink, Frank C., 629 Ridge Ave., York, Pa. Using illegal devices 20.00

Lowery, Clifford W., R. D. 1, York Haven, Pa. Operating a motor boat without displaying license 5.00

Out of State

Mershow, William, 3201 Blandensburg Road, Washington 18, D. C. Non-resident fishing without a license 25.00

Brown, Gordon, Honolulu, Hawaiian Islands. Exceeding creel limit 30.00

Lenhart, John J., 307 N. Eastman St., Harvard, Ill. Non-resident fishing without a license 25.00

Tassai, John M., R. D. 2, Princeton, N. J. Exceeding creel limit 10.00

Judd, Ethan W., 453 Girard Ave., East Aurora, N. J. One illegal trout 10.00

Swan, Ernest V., 226 Robert St., Elmira, N. Y. One illegal trout 10.00

Swan, William A., R. D. No. 2, Lenox Ave., Horseheads, N. Y. One illegal trout 10.00

Zoerb, George, R. D. No. 2, Corning, N. Y. One illegal trout 10.00

Grable, Mrs. Ida S., 130 Mr. Pleasant St., Frostburg, Md. Non-resident fishing without a license 25.00

Booth, Fred C., 1716 West 6th St., Ashtabula, Ohio. Giving false information to obtain a resident fishing license 25.00

First book in English dealing on fishing, was written in 1486. It contained 12 artificial patterns. Eleven of these early flies have their easily-distinguished counterparts in use today.

Some wise person tells us that the reason the dollar won't do as much as it once did for us is because we have formed the habit of not doing the work we used to be willing to do for a dollar.

Conservation Can't Wait

Angling for Black Bass

(*from page* 5)

One more thing which should be mentioned in connection with minnow fishing is the type minnow used. The small stonecat or stony-roller catfish is one of the finest baits. They live longer on a hook, are easily transported and are particularly well liked by the bass. Aside from this baitfish, minnows of the chub, redfin or dace variety as well as small sunfish and other pan fish are excellent bait.

Large grasshoppers and crickets are another very good bait for bass when they are surface feeding. These should be attached to the hook by means of a very thin wire. The wire can be soldered to the hook prior to use, and then the hoppers are merely placed on the hook and the wire wrapped around its body, this keeps the bait securely fastened to the hook as well as alive. These natural baits can be fished on the surface, that is, cast up and across stream and allowed to float with the current, or cast directly down stream and retrieved slowly.

I did not mention the use of frogs and the method of using them due to the fact that I have given up use of them some years ago. Undoubtedly they are a fine bait and often are the cause of some fine specimen of bass being captured. But it is a most painful job to place a frog upon the hook and view the agony which comes across its countenance. Perhaps I am too chicken hearted, but whenever the need arises for a frog bait, I generally choose an artificial lure which resembles a frog in color, shape and action and I have always had just as good results. However, if it is your choice to use frogs you will find at times they are wonderfulbaits. They can be fished on the surface, that is allowed to swim, float and kick about on the surface, or can be used on the bottom by adding a lead sinker. Here again, after a bass takes the bait, it should be given a little time to mouth the bait properly before setting the hook.

There are various other baits which can be used and various other methods which can be employed when using the bait mentioned. However, these listed are among the most popular and probably the most productive ways of taking bass. Perhaps you have other systems which enable you to capture many bronzebacks, in which case, continue to use them and enjoy



Large mouth bass prefer mud bottom lakes and harbor generally near lily pads.

the gameness and savageness of the black bass.

The proper equipment for bass fishing can begin a rather lengthy discussion. However, there are certain items which I will mention that I prefer. The choice of many fellows is a bait casting rod, however, I have always favored a heavy action fly rod generally of nine feet length. It is far easier to control a long line on a fly rod when a hooked fish makes a long run, also more pleasure is experienced in playing a hooked fish. It is quite hard work and it takes a fair rod to stand up under the strain, and often a 'set' is soon acquired in the rod. This 'set' does not harm the rod for bait fishing and so it should be quickly overlooked.

An automatic reel is excellent for quickly taking in slack line, however, this type reel is not required and a single action hand operated reel can be used. It should have a capacity for at least fifty yards of line.

Leaders are another important factor. While bass are not as wary as trout nor as gut shy, it is well to use a four to six feet level leader about a four to six pounds test to erase any suspicion in the eyes of the bass. Rather than a snelled hook being attached to the leader, a size 1/0-1, 2 or 4 hook can be tied directly to the leader and thus eliminate the danger of slipping knots.

Spinners should be included in the tackle as a spinner placed in front of a gob of worms or minnow and slowly trolled behind the boat often brings results when everything else fails. However, unless the bait is used on a gang hook, the bass should be given time to mouth the bait properly before setting the hook.

The equipment required for bait fishing is rather simple compared to the necessary items carried when using artificial lures and the assortment of lures required.

However, a discussion of artificial lures will be presented to you in the next issue of the ANGLER.

The Low-down on Pymatuning Fishing

(*from page* 3)

It is this fish that has given the Spillway between the upper (refuge) area and the main reservoir its worldwide fame. But contrary to what most fishermen are led to believe, the carp are not taking over. As a matter of fact, regular seining operations conducted by the Pennsylvania Fish Commission keep this prolific species under control.

Carp are popular game with legions of Pymatuning fishermen. The breakwater fronting the Spillway, the Causeway and numerous other spots along the 70 mile shoreline are constantly occupied by carp anglers. And if they all could cook this coarse fish like the wife of the angler who treated me to a generous portion of it, we would have far more carp fishermen. It was prepared with a kind of a sour sauce that was certainly a gourmand's delight.

That the carp has enthusiastic followers is indicated by the outfits used by some enthusiasts. One trio observed had among other things, chromium plated rod holders, folding chairs, special lamps and a bewildering array of carp baits.

That the piscatorial potentialities of this sixteen-mile long body of water are not transitory is borne out by the fact that the Pennsylvania Fish Commission is now engaged in the construction of the largest warm water fish producing plant in the world. They are going to utilize the prodigious quantities of the natural fish food with which the lake abounds to produce more and better fish for the fishermen of our Commonwealth. But, don't wait until then. Give it a whirl at your earliest convenience.

Get worms down to the bottom, where they can squirm around and look natural. Avoid a sinker whenever possible, for the weight will hold the bait still.

Marriage is just like sitting in a bath tub. After you get used to it, it ain't so hot.

Finned Dynamite

(*from page 7*)

lakes every Spring when the ice was breaking. Later on it got some of us to wondering, would pickerel spawn and thrive in a land-locked lake?

I do not know personally of a lake without a feeder stream having Chain Pickerel. There is no doubt about the habit of running the feeders to spawn in early Spring. However, I believe that any lake with an area of thin, weedy water would be suitable for pickerel breeding grounds . . .

I shall never forget how one of the gang informed me one day that "it ain't scientific to catch pickerel with minnows an' perch bellies." We were just in that period of schooling where the word 'scientific' carried a heap of weight. So I listened eagerly to his elaboration of bait casting.

It was on a tiny nameless pond that I first struck it lucky with an artificial lure. It was a hot, sticky afternoon, and I went fishing because I had free time and there was nothing better to do. I sat under a friendly sycamore and tied on a weedless silver spoon. Then began a long session of casting and untangling backlashes, with the latter occupying most of the time. I hadn't learned that the wrist, not the arm, does the work in bait casting.

To my surprise a pickerel finally snagged onto that spoon. The fish struck as the lure hit water. He zoomed around the weeds for a while and then rolled over, his white belly showing, and permitted me to reel him in. Not much of a fighter, I thought, carelessly pulling him toward the bank.

That was my mistake. The pickerel came out of his stupor, shook himself on the top of the water, and spun my lure into the weeds. He lay motionless for an instant then quietly swam away. An old pickerel trick, and I had fallen for it.

But I had snagged into a pickerel on an artificial lure and my hopes were riding the clouds. I kept at it all afternoon. I hooked a few more that I lost and landed a few. It was interesting enough that I decided to skip supper.

Lucky that I did. I'd have missed that greatest thrill to the pickerel fisherman—a wild feeding spree.

I've hit the feeding spree characteristic of the pike family several times since, twice with that greater cousin the northern pike; but that first time was my greatest thrill. Those pickerel were bloodthirsty savages, true wolves on the trail of meat. They ripped into my spoon, and when one of them



A pocono area pickerel pond.

tore the spoon from the line, pounced on a pikie minnow with equal fury. Thin, snake-like fellows, they danced on the water, shaking their bony jaws and twisting in the twilight gloom. They were still at it, more furious than ever, when a thunderstorm broke and ended the sport . . .

There is one last pickerel experience worth the telling. Davey Krauss and I were bait casting the Tohickon Creek without success on a warm late summer evening. After while both of us switched lures. We couldn't seem to strike a killer although occasionally a pickerel would jump water.

Puzzled, I walked the stream bank. Wading through high grass I noticed great numbers of tiny leopard frogs hopping around. Several of them bounced into the creek and swam upstream. There was a sudden swirl in the water; a tail thrashed; and the frog was gone.

The answer was before our eyes! . . . Davey had an imitation frog in his kit and tied it on. It was a poor affair, with little action and too much weight. Nothing happened.

"I'm going to catch one of those pickerel!" Davey said with impatient turns at his reel.

He got down in the grass and caught a frog. He put in into his creel, then changed rigging. I worked on my own outfit then, finally hooking one of the leopard frogs under the lower jaw with a small treble hook. By the time I was ready Davey had bounced his frog on the creek and was tied fast to a pickerel.

It looked like sport, although I must confess I had a guilty feeling hooking on those frogs. Frogs have been a friend since childhood and something rebels when I abuse one. But a desire to hook into a pickerel was great.

When finally I got my strike it was against the shore. I jerked too quickly and the frog was ripped from the hook. I hunted another frog and hooked him on. A pickerel quickly nabbed him. This time I was ready, allowed plenty of time. He finally came to net . . .

Yes, the pickerel has been a good friend. Some call him coward and will not term him a game fish. Actually pound for pound there is little to choose between pickerel and bass. And his flesh is good to eat. Give him a chance and the pickerel will prove himself to be finned dynamite.

Rod Repair Kits

By Don Shiner

Ever have the experience of breaking a rod while along some stream, miles from the nearest town? Unless a spare rod is back at the cabin or car, chances are the entire outing will be ruined.

However, there is one method which can be taken to remedy such an occurrence, and the broken or disabled rod can quickly be returned to a usable condition in a matter of minutes.

Assemble a few items, such as a spool of nylon or silk thread, an ounce vial of clear lacquer (clear fingernail polish), ferrule cement, a half dozen assorted snake or wire guides, razor blade, an extra tip-top, paper clip, a small ⅛ inch drill and a small combination screw driver and wrench. All these items will fit into a small plastic vial or tube. As for its added weight, it can never be detected when among the many tackle accessories.



You may be fortunate and never require the services of such a kit, but if the time arises that it is needed, it is needed the worse kind of a way.

Suppose the rod is broken at the base of a ferrule. The small drill can quickly be used to drill the section of bamboo still remaining in the ferrule. Once the ferrule is cleared, the rod section can be scraped down and the ferrule recemented in position. Even the beginner can reset the ferrule well enough so that angling can be resumed.

Even a tip which is splintered can be repaired along the stream by wrapping thread around the split. Thus, reinforced, it can be usable again and the outing need not be interrupted for any length of time.

A small kit which includes these items, or more if you so desire, will at some time prove its worth. You may be required to carry it dozens of times before any need arises, but if such a disaster occurs, this kit will prove to be one of the most helpful friends ever included in your tackle.

Pennsylvania Streams Regularly Stocked with Bass

A guide to the leading bass waters in Pennsylvania which are approved, regularly stocked—and open to the public fishing listing the major streams and lakes—size—county—location—highway routes, and points from which they can be reached.

Name of Stream	*Reached at*	*Approx. Size of waters*
Adams County		
Bermudian Creek	York Springs, Rt. 15	5 mi.
Conewago Creek	East Berlin, Rt. 234	12 mi.
Conewago, S. Br.	New Oxford, Rt. 30	1 mi.
Marsh Creek	Cashtown, Rt. 30	11 mi.
Allegheny County		
North Park Lake	Wexford, Rt. 19	47 A.
Armstrong County		
Allegheny River	Freeport, Rt. 28	34 mi.
Beaver County		
Beaver River, Little, N. Fork	Darlington, Rt. 51	12 mi.
Brush Creek	Unionville, Rt. 68	5 mi.
Connoquenessing Creek	Harmony Junction, Rt. 68	13 mi.
Bedford County		
Bobs Creek	Pavia, Rt. 869	7 mi.
Dunning Creek	Cessna, Rt. 220	14 mi.
Gordon Lake	Bedford Valley, Rt. 220	275 A.
Raystown Br. Juniata River	Everett, Rt. 30	40 mi.
Wills Creek	Hyndman, Rt. 96	9 mi.
Berks County		
Hopewell Lake	Birdsboro, Rt. 83	62 A.
Maiden Creek	Lenhartsville, Rt. 22	20 A.
Ontelaunce Lake	Shoemakerville, Rt. 122	1083 A.
Swatara Creek, Little	Bethel, Rt. 22	6 mi.
Tulpehocken Creek	Robesonia, Rt. 422	29 mi.
Blair County		
Frankstown Br. Juniata River	East Freedom, Rt. 220	14 mi.
Williamsburg Dam	Williamsburg, Rt. 866	45 A.
Bucks County		
Bristol Pond	Bristol, Rt. 13	55 A.
Lehigh Coal and Navigation Co. Canal	Bristol, Rt. 13	23 mi.
Neshaminy Creek	Chalfont, Rt. 202	32 mi.
Neshaminy Creek, Little	Neshaminy, Rt. 611	5 mi.
Perkiomen Creek, N. E. Br.	Sellersville, Rt. 309	8 mi.
Swamp Creek, East	Quakertown, Rt. 309	5 mi.
Tohickon Creek	Quakertown, Rt. 309	21 mi.
Warren Lake	Revere, Rt. 611	40 A.
Butler County		
Connoquenessing Creek	Butler, Rt. 8	12 mi.
Glade Run	Butler, Rt. 8	4 mi.
Sportsmen's Club Lake, Harmony-Zelienople	Zenienople, Rt. 68	15 A.
Slippery Rock Creek	Elliot Mills, Rt. 108	9 mi.
Wolf Creek	Butler, Rt. 8	8 mi.
Cameron County		
Driftwood Branch	Driftwood, Rt. 120	8 mi.
Carbon County		
Harmony Lake	Blakeslee, Rt. 115	110 A.
Tippet Swamp	Nesquehoning, Rt. 209	45 A.
Centre County		
Bald Eagle Creek	Beech Creek, Rt. 220	2 mi.
Chester County		
Brandywine Creek, E. Br.	Downingtown, Rt. 30	2 mi
Clarion County		
Allegheny River	Foxburg, Rt. 338	10 mi
Piney Creek	Limestone, Rt. 66	7 mi
Red Bank Creek	Rimersburg, Rt. 68	20 mi
Clearfield County		
Clearfield Creek, Little	O'Shanter, Rt. 453	5 mi
Sabula Dam	Sabula, Rt. 255	42 A.
Sandy Lick Creek	DuBois, Rt. 219	8 mi
Clinton County		
Bald Eagle Canal	Lock Haven, Rt. 220	80 A.
Bald Eagle Creek	Lock Haven, Rt. 220	12 mi
Pine Creek	Jersey Shore, Rt. 220	5 mi
Columbia County		
Fishing Creek	Bloomsburg, Rt. 11	12 mi
Fishing Creek, Little	Sereno, Rt. 42	8 mi
Huntingdon Creek	Forks, Rt. 339	6 mi
Crawford County		
Oil Creek	Centerville, Rt. 8	9 mi
Canadohta Lake	Lincolnville, Rt. 8	169 A.
Clear Lake	Spartansburg, Rt. 77	250 A.
Conneaut Creek	Conneautville, Rt. 18	10 mi
Conneaut Lake	Conneaut Lake, Rt. 6	925 A.
Cussewago Creek	Little Corners, Rt. 98	8 mi
Drakes Dam	Cambridge Springs, Rt. 19	100 A.
French Creek	Cambridge Springs, Rt. 19	40 mi
Pymatuning Resv.	Jamestown, Rt. 322	5000 A.
Sugar Lake	Sugar Lake, Rt. 78	90 A.
Cumberland County		
Carlisle Water House Dam	Carlisle, Rt. 11	48 A.
Conodoguinet Creek	Carlisle, Rt. 11	40 mi
Susquehanna River	New Cumberland, Rt. 111	9 mi
Dauphin County		
Conewago Creek	Elizabethtown, Rt. 230	9 mi
Susquehanna River	Middletown, Rt. 230	10 mi
Swatara Creek	Palmyra, Rt. 422	10 mi
Wildwood Lake	Harrisburg, Rt. 22	135 A.
Erie County		
Conneaut Creek	Albion, Rt. 6 N.	6 mi
Edinboro Lake	Edinboro, Rt. 99	240 A.
Erie Lake	Erie, Rt. 19	—
French Creek	Mill Village, Rt. 6	3 mi
French Creek, S. Br.	Union City, Rt. 6	3 mi
French Creek, W. Br.	Wattsburg, Rt. 8	6 mi
LeBoeuf Lake	Waterford, Rt. 19	70 A.
Fayette County		
Indian Creek	Indian Head, Rt. 711	6 mi.
Forest County		
Allegheny River	Tionesta, Rt. 62	14 mi.
Tionesta Flood Control Dam	Tionesta, Rt. 62	480 A.
Franklin County		
Conochocheague Creek	Chambersburg, Rt. 30	14 mi.
Conochocheague Creek, W. Br.	Greencastle, Rt. 11	31 mi.
Conodoguinet Creek	Orrstown, Rt. 433	30 mi.

Fulton County

Cowan's Gap Dam	Burnt Cabins, Rt. 522	42 A.
Licking Creek	McConnellsburg, Rt. 30	5 mi.

Greene County

Brown's Fork Creek	Waynesburg, Rt. 18	7 mi.
Dunkard Creek	Bobtown, Rt. 88	6 mi.
Dunkard Creek, Penn Fork	Brave, Rt. 218	6 mi.
Ruff Creek	Waynesburg, Rt. 18	7 mi.
Ten Mile Creek	Waynesburg, Rt. 18	12 mi.
Wheeling Creek, N. Fork	Graysville, Rt. 21	5 mi.
Wheeling Creek, S. Fork	Graysville, Rt. 21	4 mi.
Whiteley Creek	Greensboro, Rt. 88	2 mi.

Huntingdon County

Aughwick Creek	Maddensville, Rt. 176	12 mi.
Juniata River	Huntingdon, Rt. 22	12 mi.
Penn Central Dam	Huntingdon, Rt. 22	576 A.
Raystown Branch	Huntingdon, Rt. 22	35 mi.
Standing Stone Creek	Huntingdon, Rt. 22	10 mi.

Indiana County

Mahoning Creek, Little	Indiana, Rt. 422	17 mi.
Yellow Creek	Indiana, Rt. 422	10 mi.

Jefferson County

Red Bank Creek	Brookville, Rt. 322	9 mi.

Juniata County

Juniata River	Mifflintown, Rt. 322	21 mi.
Tuscarora Creek	Port Royal, Rt. 75	16 mi.

Lackawanna County

Baylors Pond	Fleetville, Rt. 407	100 A.
Chapman's Lake	Dundaff, Rt. 147	98 A.
Chystal Lake	Dundaff, Rt. 147	191 A.
Deer Lake	Fleetville, Rt. 107	34 A.
Handsome Lake	Fleetville, Rt. 107	25 A.
Newton Lake	Dundaff, Rt. 147	112 A.
Sheridan Lake	Fleetville, Rt. 107	90 A.
Susquehanna River, N. Br.	Ransom, Rt. 629	2 mi.

Lancaster County

Chickies Creek, Big	Mt. Joy, Rt. 230	20 mi.
Cocalico Creek	Denver, Rt.	13 mi.
Conestoga Creek	Lancaster, Rt. 30	50 mi.
Conowingo Dam	Chestnut Level, Rt.	6000 A.
Holtwood Dam	Pequea, Rt. 324	2300 A.
Middle Creek	Rothsville, Rt. 722	4 mi.
Muddy Creek	Terry Hill, Rt. 897	10 mi.
Octoraro Creek	Christiana, Rt. 372	20 mi.
Safe Harbor Dam	Columbia, Rt. 30	6000 A.
Susquehanna River	Columbia, Rt. 30	10 mi.
Wengers Mill Dam	Brownstown, Rt. 222	18 A.

Lawrence County

Beaver River, Little, N. Fork	Enon Valley, Rt. 351	6 mi.
Neshannock Creek	Volant, Rt. 278	9 mi.

Lebanon County

Stracks Dam	Myerstown, Rt. 422	42 A.
Swatara Creek	Palmyra, Rt. 422	6 mi.
Swatara Creek, Little	Jonestown, Rt. 22	7 mi.

Luzerne County

Cummings Pond	Orange, Rt.	43 A.
Harvey Lake	Alderson, Rt. 115	660 A.
Huntingdon Creek	Huntingdon Mills, Rt. 239	6 mi.
North Lake	Sweet Valley, Rt. 29	40 A.
Nuangola Lake	Nuangola, Rt. 309	98 A.
Silkworth Lake	Silkworth, Rt. 29	75 A.
Sylvan Lake	Sweet Valley, Rt. 29	81 A.

Lycoming County

Loyalsock Creek	Montoursville, Rt. 220	6 mi.
Lycoming Creek	Williamsport, Rt. 220	7 mi.
Pine Creek	Waterville, Rt. 44	35 mi.

McKean County

Oswayo Creek	Shinglehouse, Rt. 44	6 mi.

Mercer County

Cool Spring Creek	Mercer, Rt. 19	4 mi.
French Creek	Carlton, Rt. 322	2 mi.
Neshannock Creek	Mercer, Rt. 19	7 mi.
Pymatuning Creek	Clarksville, Rt. 18	7 mi.
Sandy Creek	Stoneboro, Rt. 62	17 mi.
Sandy Lake	Stoneboro, Rt. 62	149 A.
Shenango River	Clarksville, Rt. 18	26 mi.
Shenango River, Little	Greenville, Rt. 18	15 mi.
Wolf Creek	Grove City, Rt. 78	2 mi.

Mifflin County

Jacks Creek	Lewistown, Rt. 322	5 mi.
Juniata Country Club Dam	Newton Hamilton, Rt. 103	30 A.
Juniata River	Lewistown, Rt. 322	24 mi.

Monroe County

Bradys Pond	Pocono Lake, Rt. 940	320 A.
Delaware River	Delaware Water Gap, Rt. 611	15 mi.
Mill Pond No. 1	Tobyhanna, Rt. 611	80 A.
Naomi Lake	Naomi Pines, Rt. 940	251 A.
Stillwater Dam	Pocono Summit, Rt. 940	272 A.

Montgomery County

Macoby Creek	Red Hill, Rt. 29	2 mi.
Pennypack Creek	Bethayres, Rt. 232	2 mi.
Perkiomen Creek	Schwenksville, Rt. 29	23 mi.
Perkiomen Creek, N. E. Br.	Schwenksville, Rt. 29	8 mi.
Perkiomen Creek, N. W. Br.	Red Hill, Rt. 29	5 mi.
Ridge Valley Creek	Summeytown, Rt. 63	3 mi.
Skippack Creek	Collegeville, Rt. 29	8 mi.
Swamp Creek, West	Gilbertsville, Rt. 73	10 mi.

Montour County

Chillisquaque Creek	Washingtonville, Rt. 54	15 mi.

Northampton County

Delaware River	Raubsville, Rt. 611	12 mi.

Northumberland County

Chillisquaque Creek	Montandon, Rt. 45	6 mi.

Perry County

Buffalo Creek	Newport, Rt. 34	2 mi.
Juniata River	Millerstown, Rt. 322	10 mi.
Shermans Creek	New Bloomfield, Rt. 34	13 mi.
Susquehanna River	Marysville, Rt. 11	27 mi.

Pike County

Big Tank Pond	Bohemia, Rt. 590	80 A.
Delaware River	Milford, Rt. 6	63 mi.
Fairview Lake	Tafton, Rt. 6	110 A.
Pecks Pond	Pecks Pond, Rt. 402	300 A.
Twin Lakes	Twin Lakes, Rt. 6	235 A.
Wallenpaupack Lake	Paupack, Rt. 507	5000 A.
White Deer Lake	Blooming Grove, Rt.	48 A.

Potter County

Oswago Creek	Shinglehouse, Rt. 44	6 mi.

Schuylkill County

Sweet Arrow Lake	Pine Grove, Rt. 443	150 A.

Snyder County

Mahantango Creek, N. Br.	Mt. Pleasant Mills, Rt. 35	8 mi.
Middle Creek	Middleburg, Rt. 522	12 mi.
Penns Creek	Selinsgrove, Rt. 11	14 mi.
Pennsylvania Power & Light Co. Dam	Selinsgrove, Rt. 11	100 A.

Somerset County

Laurel Hill Creek Dam	Somerset, Rt. 31	55 A.
Youghiogheny Dam	Confluence, Rt. 53	450 A.

Susquehanna County

Comforts Pond	Comforts Pond, Rt. 70	60 A.
East Lake	New Milford, Rt. 11	35 A.
Elk Lake, Big	Elk Lake, Rt. 29	84 A.
Fiddle Lake	Burnwood, Rt. 270	61 A.
Foust Lake	Fairdale, Rt. 106	46 A.
Fox Pond	Susquehanna, Rt. 92	25 A.
Laurel Lake	Lawsville Centre, Rt. 29	48 A.
Middle Lake	Harford, Rt. 537	40 A.
Montrose Lake	Montrose, Rt. 106	50 A.
Pages Pond	New Milford, Rt. 492	96 A.
Quaker Lake	Quaker Lake, Rt. 167	127 A.
Tingley Lake	Harford, Rt. 547	40 A.
Upper Lake	Harford, Rt. 547	45 A.
Wrighters Lake	Thompson, Rt. 70	90 A.

Union County

Buffalo Creek	Mifflinburg, Rt. 45	10 mi.
Laurel Park Dam	Laurelton, Rt. 888	10 A.
Millmont Dam	Millmont, Rt. 888	24 A.
New Berlin Dam	New Berlin, Rt. 104	8 A.
Penns Creek	New Berlin, Rt. 104	20 mi.
White Deer Hole Creek	Allenwood, Rt. 404	6 mi.

Venango County

Allegheny River	Oil City, Rt. 8	60 mi.
French Creek	Sugar Creek, Rt. 322	13 mi.
Sandy Creek	Franklin, Rt. 8	3 mi.

Warren County

Allegheny River	Warren, Rt. 6	30 mi.
Conewango Creek	Akeley, Rt. 62	15 mi.

Washington County

Buffalo Creek	Avella, Rt. 28	10 mi.
Chartiers Creek, Little	Eighty-four, Rt. 31	6 mi.
Little Chartiers Creek Dam	Morganza, Rt. 19	80 A.
Ten Mile Creek	Millsboro, Rt. 88	8 mi.

Wayne County

Beach Lake	Beach Lake, Rt. 106	110 A.
Como Lake	Lake Como, Rt. 247	85 A.
Coxtown Lake	Starrucca, Rt. 239	109 A.
Delaware River	Narrowsburg, Rt. 106	50 mi.
Fourmile Pond	Shekawken, Rt. 570	70 A.
Fourmile Lake, Little	Poyntelle, Rt. 182	52 A.
Keens Pond	Waymart, Rt. 6	86 A.
Sly Lake	Sly Lake, Rt. 249	52 A.
Woods Pond, Upper	Cold Springs, Rt. 371	75 A.

Westmoreland County

Bridgeport Dam	Mt. Pleasant, Rt. 31	95 A.
Keystone Coal and Coke Company Reservoir	New Alexandria, Rt. 22	57 A.

Wyoming County

Carey Lake	Tunkhannock, Rt. 28	200 A.
Chamberlin Pond	Jenningsville, Rt. 187	47 A.
Oxbow Lake	Tunkhannock, Rt. 6	60 A.
Susquehanna River, N. Br.	Meshoppen, Rt. 309	46 mi.
Tunkhannock Creek	Tunkhannock, Rt. 92	13 mi.
Winola Lake	Lake Winola, Rt. 6	198 A.

York County

Bermudian Creek	Wellsville, Rt. 74	7 mi.
Conewago Creek	Dover, Rt. 74	20 mi.
Conewago Creek, Little	Dover, Rt. 74	6 mi.
Susquehanna River	Goldsboro, Rt. 123	11 mi.

Between Rises

(*from page* 11)

had appeared at just the time when I was about to make my first cast. Fortunately my position was well screened and I had noted the time. Each evening she appeared with a punctuality that did not vary ten minutes.

It has often been noted that directly following the Shad Hatch that fishing for trout excepting at evening is a very uncertain proposition. There may be enough stragglers among the foliage to furnish fair sport, when they return to the water at dusk.

We had miscalculated the hatch, which due to the early warmth of the spring, had reached its peak two evenings before, and had left only scattered remnants to arouse our hopes for an evenings sport. An hour on the lifeless, afternoon stream had shown the folly of further effort, so I sought a convenient retreat beneath the oaks, and prepared to wait with what patience I could muster, the will of the trout.

I had lain on the dry leaves for some time on that border line between sleep and waking when a small noise aroused my attention. Making its way laboriously toward a small twig, was a wet rumpled looking insect form. A few inches away lay the opened cocoon of an Actias luna or common Moon Moth. I lay watching with intense interest as it pulled itself laboriously over the intervening inches to the twig then up to the first jutting leaf stem. There it clung and seemed to rest. After a short interval the rythmic pumping of the body and the fluttering of the immature stub wings marked the miracle of transformation. The wings expanded visibly and their colors softened and lightened until after an interval, the ugly bedraggled form had changed under my eyes to one of georgeous beauty. Transparent eye spots, lavender edging, pale peagreen wings, yellowish white "fur" body it was indeed a marvel of perfection. Many times I have watched the emergence of moths from cocoons gathered from the wilds but this was the first time I had been favored by the performance under natural conditions.

The perfection of nature as it comes from the hand of the Creator, leaves behind a feeling of awe and sober humility.

The intervals that come in our sport can fill the creel, not with fish but with that which will enrich the sport and recreate the Angler.

A Violator is a Thief

The fish violator is a thief, taking what rightly belongs to you or some other citizen.

You wouldn't hesitate a minute to call the police if you found a sneak thief making off with your automobile. Why do you hesitate to call a Fish Warden when you find him stealing your fish?

Nobody likes a squealer, but protecting your own property certainly doesn't fall into that category.

Armed Services to be Fed Fish

Members of our Armed Forces may soon be enjoying a variety of fish and seafoods instead of the customary "gold fish" diet, if present plans of the Quartermaster's Department materialize. Food technologist Jack Mayer, a native Milwaukeean who has specialized in seafood products, has been instructed to create new seafood items and prepare specifications for their use in feeding our Armed Forces. This may lead to a much greater use of all varieties of fish by our armed forces who are often stationed in localities where fresh fish is readily available. In the past the use of fish in the armed forces was confined largely to canned salmon. At one time during the war the Army was prepared to purchase large quantities of smelt, but the diminutive fish were stricken with a mysterious plague and production fell to a low point and the commercial fishermen were unable to fill the federal orders.

PENNSYLVANIA'S
ANTI-POLLUTION PROGRESS

Good Housekeeping Principles Will Reduce Industries Problems

"In many cases industry can greatly reduce its problem of treating wastes, required under the Clean Streams program of the Sanitary Water Board, by applying the principle of what is well termed 'good housekeeping'," Dr. Norris W. Vaux, Health Secretary and Board Chairman, declared in pointing out that the program is actually one of water conservation as well as one to bring back clean streams under the anti-pollution law.

"There is no question but that in many instances industries use water in far greater volume than is necessary in the course of manufacture. This is largely a result of the failure of the company to impress upon employes, not only that unwarranted use of water is costly but that it causes a greater and more involved pollution problem And there must also be a wider appreciation of the necessity of conservation of our water supplies to prevent possible serious consequences. The ever increasing demand for water both from population increase and industrial expansion is causing us to realize that supplies are not inexhaustible.

"By cutting the unnecessary use of water used in the process of manufacture there will consequently be less volume to treat for pollution before it is returned to the streams and therefore a lower investment in a treatment system and less cost of operation.

"In other instances 'good housekeeping' can be effectively applied by keeping cooling waters, and other waters which are not contaminated by the manufacturing process separate from contaminated waters which will also necessarily result in a reduction of the volume to be treated and therefore in reduced outlay in construction of treatment systems and in the operating costs.

"The necessity for 'good housekeeping' is not confined to a few industries. Every industry will benefit greatly by making a detailed check of its operations involving the use of water. It will not only be plugging up an important economic waste, but at the same time will be simplifying its responsibility under the Clean Streams program."

Municipalities Given $38,997.71

Checks totalling $38,997.71 have been given 12 additional municipalities as grants-in-aid under the Clean Streams program. The grant share made from State funds and represent up to 50 percent of the cost of the preparation of plans for sewage treatment works which have been required by the Board under the anti-pollution drive.

The latest payments were made as follows: Lemoyne, Cumberland Co., $3,486.36; Penn Township, Allegheny Co., $3,780; Shippensburg, Cumberland Co., $3,998.40; Norristown, Montgomery Co., $12,932.24; Springboro, Crawford Co., $600; Mount Wolf, York Co., $1,638.92; Glen Rock, York Co., $2,260.21; Avoca, Luzerne Co., $2,847.89; Dupont, Luzerne Co., $3,150.56; Duryea, Luzerne Co., $596.17; Ligonier, Westmoreland Co., $2,000; Marysville, Perry Co., $1,706.96.

Up to the present time a total of $540,944.31 has been paid to 97 municipalities. The grants are given after the plans are submitted and approved by the Sanitary Water Board and detailed check is made on the estimated costs of construction which are submitted with the plans. Payments are made from State funds based upon the estimated costs prevailing in 1942, and represent a percentage of the engineering costs of preparing the plans.

Paper Co. Providing Treatment

The Beach and Arthur Paper Co., Modena, Chester Co., is complying with the requirements of the Sanitary Water Board under the Clean Stream program by providing treatment of the wastes produced in the manufacture of sanitary paper products. The mill is located along West Branch Brandywine and abates pollution of that stream.

All wastes are treated chemically as they come from the mill and are then pumped to tanks for the settling out of the solids. From the tanks the clear effluent goes to the stream and the sludge is pumped to lagoons. In addition to the regular type of treatment, the wastes are also treated to eliminate color which goes into making colored paper products. The treatment plant is designed to treat approximately 450,000 gallons of waste daily.

More Sewer Constructed by Darby Creek Joint Authority

Further advancement of the Clean Streams drive of the Sanitary Water Board has been made toward abatement of pollution of Darby Creek with the completion of construction of approximately 4,375 feet of intercepting sewer along that creek by the Darby Creek Joint Authority, Delaware Co. The intercepting sewer system of the Authority now comprises about 28,375 feet of main connecting sewer and a large pumping station. Plans have been prepared for a sewage treatment works to be located at the site of the pumping station in Darby Township.

The sewage from the municipalities belonging to the Authority is now collected and conveyed downstream by the intercepting sewer system to the pumping station where it is discharged into Lower Darby Creek. Above the point of confluence with Cobbs Creek, Darby Creek is said to be now relatively clean as a result of the cooperative Authority project.

Municipalities comprising the Authority are Darby, Springfield, Upper Darby and Haverford Townships, and the boroughs of Aldan, Darby, Collingdale, Colwyn, Sharon Hill, Yeadon and Lansdowne, and a section of Clifton Heights.

More Abatement Orders Given

An additional number of business establishments have been given orders by the Sanitary Water Board to abate pollution of the streams or submit plans for waste treatment systems under the Clean Stream drive.

Ten of the concerns are located on the Schuylkill River or its tributaries, furthering the intensive drive to clean up that river. With the abatement of pollution from silt, under orders of the Board, through the installation of desilting systems by all the anthracite collieries, thorough check is being made by the Bureau of Engineering, State Department of Health, of all smaller establishments which may cause pollution. Orders for abatement or submission of plans for treatment works have been issued to the major industries and municipalities on the watershed. Construction orders have been issued in a number of cases.

Sewage Plant Built at Boys Camp

At a cost of approximately $45,000 sewers have been installed and a sewage treatment plant has been constructed at the boys camp of the Felix Fuld Camps in Dingman Township, Pike Co., operated by the New Jersey Federation of Y.M.H.A.'s., and Y.W.H.A.'s., with headquarters in Newark, N. J. The plant is designed for a capacity of 100,000 gallons a day to serve a population of 750 persons. The present population is about 450. The camps are operated about 8 weeks each year. Septic tanks were used previous to the installation of the new treatment works which was made in accordance with the requirements under the Clean Streams program of the State Sanitary Water Board.

The treatment works is of the activated sludge type. Before being discharged to the lake the clear effluent is chlorinated.

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3 Collieries Must Build Ponds

Permits approving the proposed treatment works and orders for construction of those works by specified dates, have been issued to three additional anthractie collieries, all on the Susquehanna River or its tributaries, by the Sanitary Water Board in furthering the Clean Stream drive.

The permit and order to the Ace Coal Co., Blakely, Lackawanna Co., requires the completion of the silt pond on or before April 1, 1949. The operation is located on Hulls Creek and Lackawanna River, tributaries of the Susquehanna River.

R. J. Emerich & Son, East Hanover Township, Lebanon Co., located on Swatara Creek is required to have a silt pond in operation on or before May 1, 1949. The order to the Philadelphia and Reading Coal & Iron Co., for the Brookside Colliery, Porter Township, Schuylkill Co., requires that the projected series of silt ponds be completed before the new colliery is placed in operation. The colliery is on Wisconisco Creek tributary of the Susquehanna River.

According to the Law...



You dare not operate a motor boat unless the metal license plates are displayed as required by law. The proper designated lights must be installed to operate a motor boat after dark.

The penalty is $100.00 if found guilty of interfering in any way with an officer whose duty it is to enforce the fish, game or forestry laws. This is considered a very serious offense.





If you lose your fishing license button, a duplicate can be made. If you lose the certificate a duplicate can and must be secured from the County Treasurer. If you lose both you must buy a new license.

No person may fish without a license unless they own the land and reside upon it the year around. All hired help residing thereon must have a license.

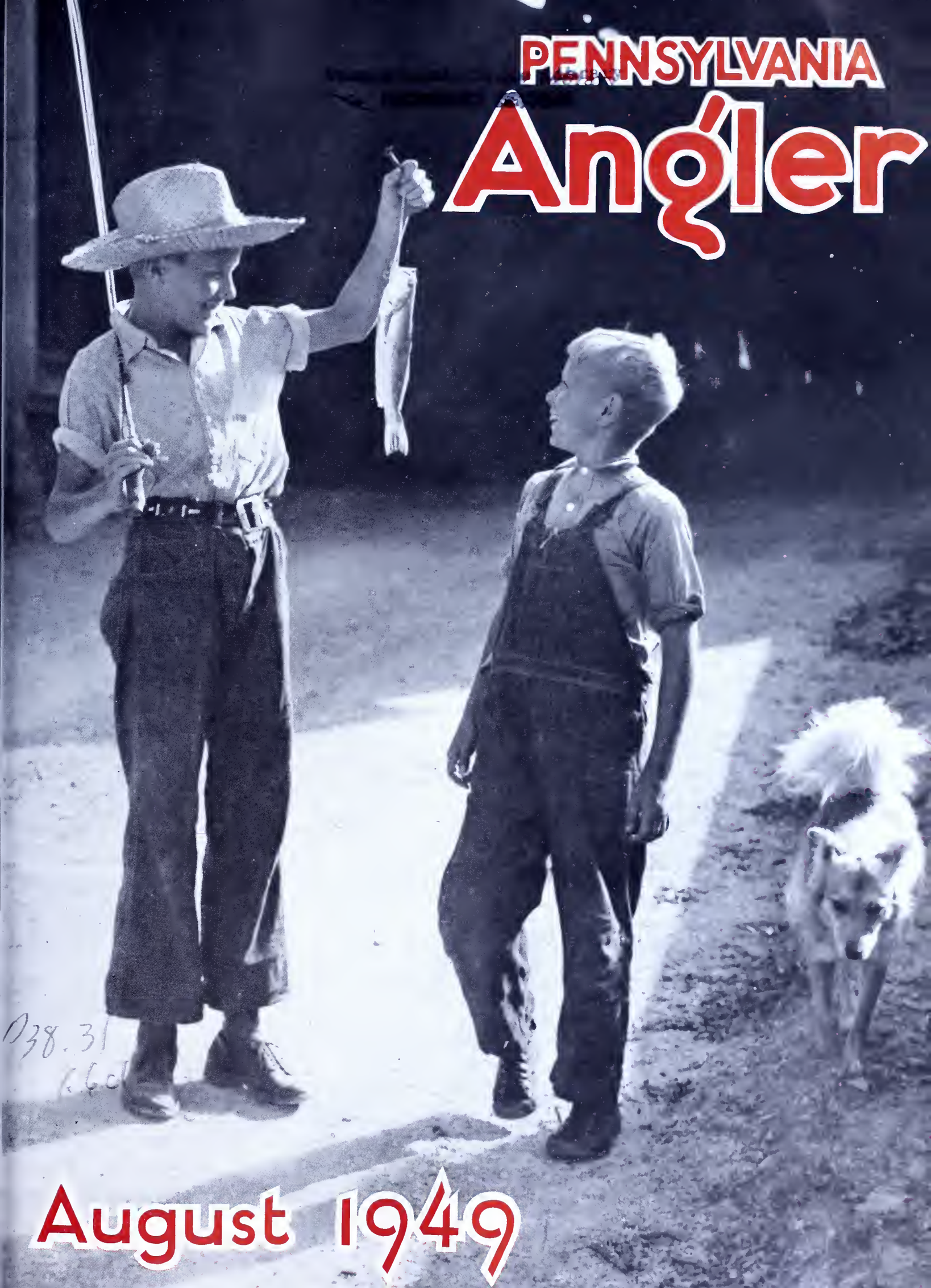




Gold fish, of any species may not be used for bait in any stream at any time. Goldfish are considered undesirable to many of our streams and their use as a bait would tend to distribute them.

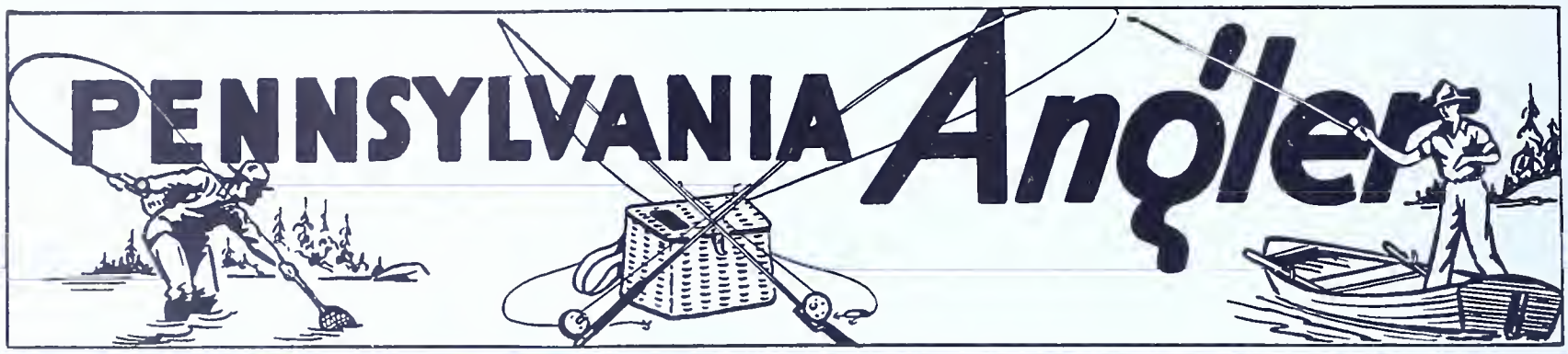
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PENNSYLVANIA Angler



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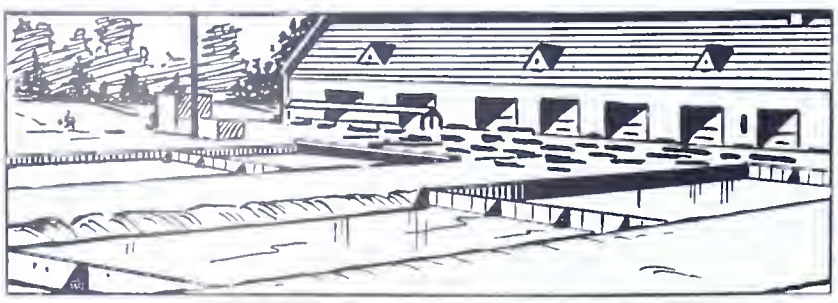
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COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA
FISH COMMISSION
HARRISBURG, PA.



The Angler

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The Cover . . .

is reminiscent of most fishermen's introduction to the sport of angling. The old covered bridge under which a lazy creek flowed, the cut pole, the fishing buddy and old pal Rover. A good start in life for many famous men.

Why Bother . . .

to save birds and trees when the world is threatened by "larger" problems?

By Alan Devoe

The other day a man whom I respect delivered to me a rather baffled little speech. It went something like this:

"There is a grave chance that at more or less any minute the atom bombs may start to drop. All over the world there is political turmoil and tension. There are a thousand urgent economic and social problems to be solved. In times like these, why bother about such trivial matters as the diminishing wildfowl or the fate of the ivory-billed woodpecker?"

It is a reasonable enough sort of question. I think all of us who are nature-minded ought to take thought about it, and formulate our answer. After all, the times are a turmoil of enormous and urgent issues. Come to think of it, just what does make us deem it worth while to go on paying devoted attention to the plight of whooping cranes, and bothering about the education of young people in nature-lore, and in general turning our notice toward the woods and fields and swamps and waters, when the times are so perilous and the headlines so blazing with great alarms?

Well, in the first place, I suppose we bother ourselves about all this for a basically practical reason. We know that man is simply one ingredient, biologically speaking, in the totality of nature; and we realize that, like every other ingredient, from skunks to prairie-grass to tadpoles, he participates in the universal interdependence of things. When the web of nature's being is anywhere broken or seriously disturbed, the effect travels throughout the whole of things, man not excepted. Let game animals be sufficiently depleted in Africa, and all of a sudden, so to speak, there is felt a nasty pinch in the luggage business in Birmingham. That is putting it a little fancifully perhaps; but the fact is there. Water-tables can go down much farther before we die. The dropping of an atom bomb can kill off an impressive number of us; but the cutting of trees and the erosion of soil and the wasting of our other natural resources can kill us all off, men and women and children, from Capetown to Kamchatka. Nature-minded people have understood this in a general way for a long time. Since the publication of *Our Plundered Planet* by Fairfield Osborn and *Road to Survival* by William Vogt we know it with a terrible clarity, down to the last sickening statistic.

Now there is little doubt, of course, that we could survive and continue to eat three meals a day if all the whooping cranes were exterminated. We are not going to die of hunger or thirst because there are no ivory-billed woodpeckers. But the conservation of such creatures as these is an inseparable part of conservation as a whole. This earth of ours all goes together; trees and water and land and birds, mammals and fish and snakes and everything else, from our own dooryard out to the farthest reach of the farthest wilderness. What we have to keep realizing—and thinking and teaching—is the wholeness of the creation. Only by inculcation of that concept of wholeness can we make understood the vital fact of man's inescapable role as an ingredient in the general interdependence of everything with everything else. Whooping cranes are not themselves an immediate factor in our security as a biological organism. But ultimately and to some degree their fate touches upon ours. In a much more than poetic sense, we are brothers of whooping cranes. We are brothers of all mammals, all birds, all living things. We are brothers of soil and air and water. The fact of our brotherhood is zoological fact, ecological fact,

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Angling for Black Bass

By Don Shiner

Part II

(This is a confirmation of Part I of Angling for Black Bass. The first part dealt with live baits and methods of taking black bass. This part deals entirely with artificial lures, the types and how and when to use each.)

WHILE live baits do take a large amount of bass each year, generally artificial lures can and are as productive. The more versed the angler is in the proper artificial lures and methods of fishing each, the fewer the times are that some bass can not be lured from its hiding place into striking.

Probably for no other species of game fish is there such a variety of artificial lures: spoons, spinners, plugs, flies, wobblers and each in a hundred different shapes and finishes. Many of the artificials are copies of living creatures which the bass are familiar with but others are more or less curiosity lures.

This is important to know—that basically the lures can be divided roughly into two groups, natural looking and performing lures, and those which are mere exaggerations of color and shapes as well as actions can be called curiosity lures. Both types are extremely effective when used properly. However, to study each group thoroughly they must be broken down into various classes to which they belong.

The natural lures are those which resemble living creatures that the bass are familiar with and are accustomed to eating. Lures which represent frogs, mice, crawfish, minnows, moths and beetles, even small birds are in the natural looking lure group. Some of the artificials available merely suggest in appearance one of these creatures, others both in actual appearance and action. Whichever type you have will work efficiently providing it is finished naturally. With the same lures some anglers catch plenty of fish while others capture only a few or draw a blank completely. This is due because of improper usage as the number one reason for the failure.



In sub-surface lures, color plays an important part in their effectiveness. Select those which represent minnows such as shiners, perch, chubs, etc. However, don't overlook a few 'curiosity' lures in this type.

One vitally important thing is to study the action each lure requires. When you are using a lure which imitates a frog, use it so it acts like one as much as possible. This means the lure after being cast to the shore line, log, lily pads or other natural frog haunts, should be retrieved in short spurts and pauses the way a frog swims. Often times after it is cast and lands in the water, the lure if allowed



Fly rods and fly rod lures for bass is growing more popular daily.

to remain at rest a few seconds up to a couple of minutes and then switched or jerked brings an instant response from nearby feeding bass.

Probably the theory of this method, why it is so effective, is when the lure lands in the water the bass are frightened and dart a few yards away and then pause to view the object. Perhaps after a few seconds, they move or nose slowly towards the object, then, if the object is given life or twitched by the angler the bass rush for the lure striking savagely. On the other hand, suppose when the lure lands in the water the frightened bass darts away and that instant the angler begins to retrieve, generally the lure is back to the angler ready for another cast before the bass are fully over their first fright.

If you are using a minnow type bait, make it act as much like a minnow as possible. Lively minnows dart through the water and then glide. Make your imitation minnow do this too, or flutter on top of the water to resemble a wounded minnow struggling to descend to the bottom.



A surface lure which is pure yellow, cream, white or white with red head is just as effective as those with colored or designs on the backs. After all fish view the lure from underneath and only the color on the belly of the lure can be seen.

In the case of a wobbling spoon, retrieve it fast enough to make it wobble, then stop and allow it to sink, then retrieve a short distance again.

If your lure imitates a crawfish, it should be allowed to sink to the bottom and then advanced by quick jerky movements with a pause again to allow it to settle back on the bottom. This same rule applies to mouse like lures as well as every other natural looking imitation—fish it naturally!

The bass, as do most all game fish, secure their food both from the bottom of the stream and the surface. Here then we can see why we need a variety of lures, some which are strictly surface lures, others which float when at rest but dive, wiggle, dart and do their work beneath the surface when retrieved, and still others which sink to the bottom and are deep runners.

In the case of surface lures, which remain on the surface when retrieved, these can be obtained in a silent gliding type or produce a variety of surface disturbances and noises. The noise making variety have long been recognized as one of the leading and best lures for bass. The noise and vibrations caused by this type lure is very teasing and luring to bronzebacks.

While there are a number of lures on the market which are "noise" makers, many are out-landishly colored. Generally the bottom or belly of the lure is white, cream or light yellow, the top or back is painted or scaled in attractive finishes. When viewing the plug from underneath only the white belly is visible and the color on top is of little value. I have had wonderful success on a pure white, creamy, light yellow, or white with red head plug of this type and fail to see where a colored back on a surface lure would produce any better since it is visible to only the angler. Probably it does give the angler more faith in the lure of this type to see it spotted like a frog or scaled like a minnow hence, it is probably used more naturally.



Deep running spoons which have weed guard attachments are best used in weedy areas.

However, in sub-surface and sinking lures, color does have a great deal to do with the effectiveness, almost as much as does the action. Lures designed so that they imitate minnows in shape and action should be painted or scaled like the minnows most prevalent in the waters being fished. A lake containing pan fish, perch or shiners, plugs colored closely to these are excellent. For creeks and streams where the many varieties of chub minnows are abundant, plugs colored closely to these minnows are best. Choose the lure which represents in action and color the most common food the bass in that vicinity take. This is another important factor to remember. For the sub-surface lures those which dive or wiggle beneath the water when retrieved, choose these to represent perch, chubs, small pike, minnows, etc.

Under water or deep running lures should be selected for color and action, that is, to resemble the common minnows as stated for the sub-surface lures, also a frog or crawfish lure should be added.

Aside from the natural looking and acting lures, the other group which is necessary are the curiosity lure. There are times when bass will not respond to live bait or the natural looking imitation lures, then something else must be used. Some lures which are entirely foreign to them in color, action and shape often arouse enough curiosity in the bass to instigate a strike at the strange looking creation.

This group, too, should be used in the three types—surface, sub-surface and sinking lure. Color plays a most important factor in this job. Bright orange, yellow, rainbow finish and all white are excellent colors in these curiosity lures. Especially in the deep running lures, the bright colors mentioned are excellent due probably that a light colored plug shows up well and can easily be seen by the fish as it scurries along the bottom.

There have been many arguments concerning whether bass, as well as other fish, are color blind. Some anglers believe that they merely see colors in various shades of grey. However, only recently there has been some very good articles by good authorities stating that fish can distinguish color, and some colors are more prominent in their spectrum than others. Red, yellow, orange and blue are the colors most luring to bronzebacks, and it has been proved by various tests that these colors are distinguishable to the bass.

It would seem odd to me if in this colorful world of ours the Creator had not assured some means to every living creature which enables them to see and distinguish colors. I sincerely feel they can and have proved it many times to myself through the years of angling. In trout and bass angling there is no difference in this respect, the color of a fly has a great deal to do with success. Most fly enthusiasts would not think of using a red ibis as a dry fly and would object to its bright red color, even though in shape and size it might imitate a May fly as an example. They would be right to object since a red ibis would be refused by the trout. Surely then there is ability to distinguish colors in fish.

So, color plays a good part in lures for bass in both groups, natural and curiosity lures.

One other factor about curiosity lures is that its action, generally unlike anything which is familiar to the bass, is successful in teasing them into striking. Bass are over supplied with curiosity or temper and often repeated casts in the same area bring results.

Size of the lure is an important factor in luring bass. Many of the older plugs were made rather large and while they were effective, today the lures are made smaller and lighter in weight, and often take twice as many bass as the large lures.

Today, too, many of the sinking lures are equipped with a weed guard attachment, and this greatly overcomes the handicap of becoming fouled on underwater debris. However, see that the tension on the weed guard is not too stiff, if it is, your bait will be weedless and will prevent the hook from penetrating into a striking fish.

Gold, silver and pearl spoons are in the deep running or sinking lure class. These offer excellent imitations of minnows, and the wobbling action as well as the glittering light effect it gives when wobbling is very killing to bass. For deep running lures, these spoons are my number one choice. However, there are some extremely good lures which have pork rind or rubber skirts attached and are ideal lures to use when a curiosity lure is required to tease any action on the part of the bass. Red and white wobblers or spoons are other good lures to use at this time.

The proper equipment for presenting these lures is the standard three to six feet casting rod of either bamboo or steel, and a level winding multiple reel. The better reels today are geared

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The Farmer and Pollution

By Dr. Norris W. Vaux

State Secretary of Health, Chairman, Sanitary Water Board

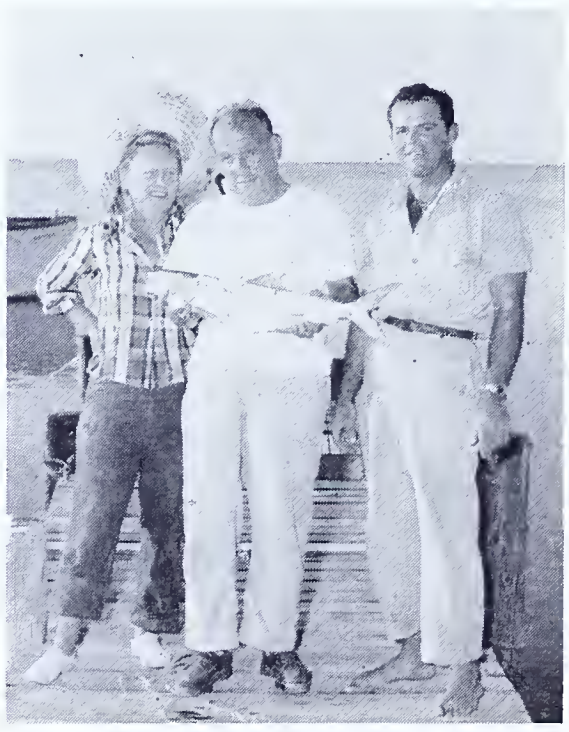
NO group is more directly effected by the condition of the water in our streams, and therefore, has a more vital interest in the Clean Streams program being vigorously advanced throughout the State, than the farmer. Polluted water flowing through grazing lands is worse than having no stream because it creates a hazard to the cattle. Many farms depend upon the streams for their water supplies and no agricultural operation can be carried on without clean water.

The program to bring back clean streams in Pennsylvania, under the direct leadership of Governor Duff, who is an ardent conservationist, has reached a high tempo in every section of the State and has already marked up accomplishments which are receiving world-wide interest. Under this program, enforced by the Sanitary Water Board and being so commendably executed by the Bureau of Engineering of the Pennsylvania Department of Health, two vital things will be accomplished. It will not only bring about abatement of pollution of the public waterways, but will result in the greatly needed conservation of our water supplies. When water used in mining and industry and by municipalities is treated before it is returned to the streams it can be used over and over again, making it unnecessary to constantly seek new sources of supply which can come only from underground supplies which surveys show are in many areas being drained to the danger point.

Accomplishments attained within a comparatively short time on the Schuylkill River watershed stand as evidence that it is not only possible to abate many types of pollution, but that there is meaning in the demand of your State Government that wherever possible, the streams will be restored for their intended use by all the people. Through the installation of desilting systems under the Sanitary Water Board's program, at all of the 47 collieries along the Schuylkill River and its tributaries, more than two million tons annually of silt which for more than a century was diverted to those waterways, is no longer entering the streams. This is the greatest accomplishment of its kind ever to be attained anywhere. And for the first time in more than 100 years other than coal black water is flowing in many sections of the Schuylkill. This improvement will prevail over its entire course when the accumulated silt shall be removed from the river bed, which is now being done.

Waste treatment plants have been built and placed in operation by many industries throughout the State and the number is fast increasing. Municipalities, under requirements of the Sanitary Water Board are submitting plans for sewage treatment works. Research of a special character is being conducted on the Clarion River to find practical means of treating all types of paper mill wastes. Research is being conducted at Mellon Institute, Pittsburgh, to find a solution for the treatment of acid mine wastes which are a serious problem in the coal mining areas of the State. A survey is being made in Lancaster County by the Academy of Natural Sciences of Philadelphia, under arrangements made by the Board, to determine the effect of pollution on various forms of living things in the stream which would serve as an indicator of the condition of the stream from a pollution point of view.

The Allegheny County Sanitary Authority is engaged in one of the most extensive projects of its kind in this country under which treatment of sewage will be provided for more than 100 municipalities including Pittsburgh, and wastes from many industries will be treated. The cost of this pollution abatement program is placed at more than 80 million dollars. Philadelphia is executing a 60 million dollars sewage treatment program and many other municipalities, ranging in population from 1,000 upwards are installing treatment works or adding to their facilities in compliance with orders from the Board.



Shown holding an 8½ pound bonefish which he took off Miami Beach, Florida, is the ever popular Johnny Mock, "All Outdoors" Editor of the Pittsburgh Press. Johnny is well known in all sportsmens circles, personally as well as his writings many of which have appeared in The Angler. Shown with Mr. Mock is Mrs. and Captain Jimmy Albright, of Marathon, Florida.

Steel mills are submitting data gathered in special surveys being made under direction of the Bureau of Engineering from which standards will be established for the treatment or disposal of acid pickling liquors used in the manufacture of steel and which has been a source of much pollution. Some mills now have installations which prevent this pollution from entering the waterways. An outstanding accomplishment is that through which, under a cooperative effort of the Bureau of Engineering with the milk industry, proposals for the treatment of those wastes were adopted by the Board and are applied to the industry as a whole. This same procedure is being followed for other industries and provides detailed information for all those engaged in certain types of industries as to the method of treatment and the requirements to be met under the Clean Streams program.

A service of great value to persons living in rural areas, which is not a direct part of the Clean Streams program, is that under which the Bureau of Engineering tests water supplies. Samples are procured by the State health officers, but before the samples will be taken the water supply must be protected from any source of pollution.

Clean Streams are vital to our general welfare and well being. They are necessary for agriculture, the backbone of our existence; for industry which requires great volumes of good water for its operation and unless industry can develop and expand we will go into an economic tailspin. We must have clean streams for the protection of health. This necessity if brought forcibly into focus when it is realized that 90 per cent of our State's population depends upon the streams for its water supplies. Clean Streams assure us of recreation, the greatest of moral builders and will protect our tourist business which now has reached the stupendous figure of a half billion dollars annually.

In the determined effort to bring back clean streams the farmer himself is not without grave responsibility.

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Turtle Epicure

By Frank J. Floss

In the little country town of Bridgeville, Pennsylvania, it is not unusual to see a poster in some store window advertising the fact that come Saturday night, there will be free turtle soup to be had at a certain club in the town proper. Saturday night is always a big night in this country town anyway for that is the night when everyone from miles around comes to town to do their shopping for the week. But with steaming turtle soup to lure them it makes an ideal place to tarry awhile and meet old friends. Its a night when farmer, banker, mill-worker, store keeper, and sales girl meet on the same footing. And many are the business deals that are opened and closed over a bowl of turtle soup.

However behind this bowl of turtle soup is a long story!

The soup is usually cooked by an expert, who for years has specialized in cooking turtle soup, and is in demand wherever there is turtle soup to be cooked. Because, addicts to turtle soup claim that only one out of every ten soup cookers can cook turtle soup the way it is supposed to be cooked.

The turtle used in making this delicious soup is known as the "Snapping Turtle," (Chelydra serpentina). It is found in most ponds, lakes, and streams east of the Rockies. Those caught for soup range in size from three to ten pounds, however I have seen turtle hunters pul out some weighing thirty pounds, and there are records of this same turtle weighing up to eighty pounds, although turtles of that size are very rare. You no doubt have seen them many times floating near the surface of some body of water with just their head sticking out, but never gave them a second look because their head resembled a floating piece of dark wood.

The actual catching of the turtle is done by men expert in catching them with their bare hands. These turtle hunts usually take place on a warm Sunday afternoon, when group of turtle hunters get together and proceed to catch enough turtles to make a batch of turtle soup. They then don old clothes and wade nearby ponds and streams known to harbour turtles. Then by continually searching under rocks, water-logged brush, and muskrat holes with their bare hands they catch the turtle as he lays napping. Its risky business too, for every once in a while one of them is bitten when they grasp a turtle in the wrong spot. Although they claim that the danger of being bitten is small. This they maintain is because the turtle very rarely strikes down at its prey. This habit they pointed out to me, the turtle acquired from always striking up at fish that swim directly, over its head, as the turtle waits on the Muddy bottom for its dinner.

Thus by always coming up under the turtle with their hands as they grope for him, they lessen the danger of being bitten. But it isn't as safe a sport as they would have you believe, because, besides the turtle there is always the unknown element of danger to take into consideration. For they never know but what a water-snake may be under the brush of a water soaked brush pile, just waiting for a chance to strike. I've also known several turtle hunters who have been bitten by a muskrat as they felt in the muskrats hole for a turtle. However these dangers never seem to scare them, for everytime there is need for turtle to make soup, you will find them out in some stream searching for them. They look with disdain on men who use traps and baited night lines to catch turtles. After they have their turtles caught, there follows a meat conditioning period of from two to four weeks. This is done by putting their catch of turtles into a conditioning tank containing pure running water. In doing this they remove the musky flavor that the turtle has acquired by living in the the under-water mud. I have also known turtle men who when they catch a turtle too small for soup put them in a swill barrel and fatten them up like they do a pig, until they reach a size big enough to kill.



This is the business end of Chelydra Serpentina or the "Snapping Turtle."

When the conditioning period is over they take the turtles out of the tank and kill them by chopping off their heads. Then after hanging them up so that the blood will drain from them, they take them and immerse them in a tub of scalding water. This helps remove the scales from the outer shell, and also the skin from the exposed parts of the body. Following this the turtle is lain on its back and the bottom shell is cracked with an axe, where it joins the side of the top shell. Then the bottom shell is pulled off and the entrails and gall bladder removed.

This done the remaining parts are put into a fresh pot of water to which vinegar and salt has been added and left set over night. The following day it is removed and placed in a pot of fresh hot water and boiled until all the meat comes off the bones. Then only the bones are removed and enough water is added to make the required amount of soup, along with enough vegetables to season. But that is not all, to this add two teaspoonful of sherry for each quart of soup, and three spoonsful of brandy this they tell me is what brings out the flavor.



Don Dickson, noted turtle hunter uses his bare hands to catch snapping turtles. Here he hold one he just pulled out of a hole under the bank.

Ramblings of an old Amateur Fisherman

The Super-Lure and the Big Fish

By A. B. Champlain

Principal Entomologist, Pennsylvania Department of Agriculture

NO matter who it was that first insidiously propogated the idea that live bait fishing was unsportsmanlike or unethical or something—the reaction has at last reached me. I am now ashamed to admit that I ever presumed to hunt night crawlers or impale a hellgrammite. I don't mind confessing that respectable laziness is partially responsible for my change of heart—and have a sneaking idea that the instigator of the artificial lure fad was in the same boat. When I realize that I can carry so compactly and with so little trouble all of the paraphernalia needed; artificial flies and "what not," I am just the one to fall for it. No bait boxes, cans, dip-nets, or other useless incumbrances!

The astonishing thing about it all to me, however, is that any intelligent fish would be fooled by the imitation "bugs" that are presented to it as resemblances of insect life—especially fish that have been instinctive entomologists for ages, and connoisseurs, consumers and epicures in their taste for these creepy, crawly, fluttering morsels. I have another private conviction about fish in general that may be entirely wrong. I think that they are stupid, ignorant and grasping, in spite of the peppy, alert front that they pretend to present. Or perhaps they are resentful and have a mean disposition, taking a crack at any small foreign object that falls into their domain, which they feel big enough to "lick," even if they don't want to eat it.

Ignoring for a time the poor fish, what self-respecting insect, may I ask, would accept as a congener or relation any of the so-called flies tied to resemble them? You might fool a fish, but not on your life could you induce any "bug" to fall for these adulterations or imitations. Now if this is the case, where is there any ethical difference between live and artificial bait? Why not try to make an artificial lure look enough like a fly to fool an insect; and the echoes answer—because most fishermen don't know what an insect really looks like any more than a fish does. So there you are.

When is an insect an insect? As question number one in an intelligence test this is a humdinger. It is just as bad or worse than question number two: When is an insect not a bug? Many honest persons candidly state that they do not know. Well, I do! In fact, although only an ordinary fisherman and without any superstitious training or college misinformation, I feel that I know as many scientific names and as much technical gossip about "bugs," and am able to tell you about them just as incomprehensibly, as if I were scientifically inclined and had a big B. S. after my name (whatever that means). It took a long breath to say all that, but this weighty matter, considered by many to be an open secret, should be of interest to modern or fundamental fishermen.

It was a very puzzling problem to a celebrated after-dinner fishermen and speaker, who asked me to straighten him out on the matter. He knew the lair of the proverbial "big fish"—that nobody could catch with live or artificial lures—that hung in the deep, dark waters, under the overhanging cliffs of Sherman's Creek.



James O'Neil, 324 South Main St., Homer City, and the fine muskie he caught at Lock 8 on the Allegheny River last September 24. The fish was weighed and measured by Arthur L. Walker, State Fish Warden at Indiana, Pa., and checked in at 48¼ in. in length and weighed 31 lbs.

He always insisted that all insects were bugs and even didn't know when an insect was an insect. So while putting a "bug in his ear," so that we would know the true story in the hereafter and could make a real try for the "big fish," all of the fishermen can tune in and get the straight dope. Then you can take your choice—go back to bait fishing or make your flies look real enough to fool other "bugs."

All insects are not bugs—any dictionary will tell you that—but don't depend on dictionaries for all your information; look for yourself like I do. In addition to bugs, there are beetles, moths, grasshoppers and a lot of other something-*ptera* that covers a multitude of insects and sins. Hemiptera are bugs; Lepidoptera are moths and butterflies and Diptera are flies.

To begin with, a topographical map of an insect shows that it is divided into three distinct parts. Sometimes the divisions are more or less imaginary like the equator, or indistinct like an editor's signature, and sometimes they are evident. Referring to a mature insect of voting age, with all faculties intact, we find: the front region called the head, adorned with feelers and supplied with two kinds, and a great number of eyes; the tail region that is nicknamed the abdomen, which in some cases is provided with a sharp instrument that may be impressive in any degree; while the middle area, bearing the wings and six legs, is called the thorax. Now isn't this simple?

Knowing all this, I then looked inside of some of these little problems of "bugdom", to see what made the wheels go round. I found a-plenty. It was their clever Waterbury movement and the jumping tricks that decided me on how to proceed. I resolved to go into the far places and commune in person with these six-legged denizens of the insect world and compile the dope for my friend who wanted to catch the "big fish" of Sherman's Creek. I located a likely territory so far out that it was miles away from itself, and tried to feel and act like an entomologist with a big problem to solve. In addition I felt the germs of spring fever and the call of the wild for the place was ideal.

Remember the big woods out back of "Round Top" where the white polished chestnut skeletons, or their snag-like remains, dot the distant hills like an enormous cemetery; where the old oaks and a hickory or two, missed by the less discriminating woodsmen, stand out and give a primeval touch of the landscape—and the stingy brook that

hunts the changing levels, to haunt the bottomlands before it helps to feed the creek? It ripples and gurgles through the ferns and moss-covered rocks, sometimes lost or hidden by skunk cabbage or old leaf-drift. You know the place I mean—where the gray squirrels were thick in the old days; where the fox tracks were found in the snow, the rabbit fur and the crimson stain, all fitting in with a thrilling tragedy that was an easy problem for our imagination. Where you missed your first turkey and shot your first grouse—the place where the bear came over the mountain. That's the place—where you step charily in the narrow, summer sun-lit trail because copperheads are thick and hate to move. Where you had the thrill when the buck and does crashed away from right under your nose—where it smells like the unbottled "essence of ozone" and "Attar of woodlands"—where the refreshing draught from the almost hidden spring reminds you of the story of the fountain of youth—that's the place I mean.

Here I studied bugs and other insects, and although you may think it unrefined and personal, I noted their hops, their crawls and their wriggles. Sized up the monoplane and bi-plane varieties, investigated the fat ones to the last calory and discarded the skinny ones; and with it all looked into their most intimate peculiarities, their pastimes and etiquette. It took a lot of patience and endurance but in this way I discovered the very best that pertained to each in their qualifications for good fish bait. Then I made up my mind to apply these selected characteristics with a few imaginative additions to the scientific matter of fooling not only the fish, but the insects themselves. In other words, to originate an insect lure that would solve the problem of the wise old "big fish" of Sherman's Creek. I would manufacture and tie a super-lure whose purpose it would be to act and look more real than any insect now extant.

Well, I went into retirement and all of my time was devoted to the sport of preparing the artificial insect lure that would fool anything. I must admit that if anyone had informed me that it was work, I might have been saved a lot of energy, and desisted; but I emerged filled with triumph and in my wallet reposed the results of deep study and prolonged thought, the masterpiece of a creative imagination. You would think that the "bug" stork had flown wild or that nature had made a mistake, for what it was I could not say. Something like an orthopteron in regard to hops and jumps, but with coleopterous features and dipterous tendencies, it had the qualifications of an aquatic hemipteron, to boot. Best of all and thanks to an old "Ingersoll" and the alarm clock, it would wriggle, crawl, squirm and fly—it would even squeek, if it wasn't oiled. Glittering with all the colors of the rainbow, a replica in miniature of Jacob's coat, it also had a "doo-dad" on its head that was not quite centered, but it looked well and answered for the feelers. It was the very last word in eight-cylinder "bug" models, and, although having no sex-appeal, it had a way about it—so called "it."

Tenderly and carefully we (for my friend had joined me at this psychological moment) conveyed our prize to the lovely shores of Sherman's Creek. With the special rod all rigged and set, I removed "it" from the case and hitched it to the line. Then I let it loose. Did it perform? Well, I guess it did! First it played around on the grassy shore, beneath the beautiful overhanging trees. We watched its antics. Other curious eyes were watching, too. Soon the astounding phenomenon of its unique position in the world became manifest. Insect heads peered over ledge and knoll and hillock! Curious questioning faces, filled with wonder, puzzled, yet interested. Flutterers of the air hovered—stopped, looked, listened and soon we were surrounded by the insect world. This freak of mine had done its stuff on land. Now for the grand throw!

"It," took off in a graceful swoop—it circled, detoured and looped the loop, while after it sailed the insect mob. With complete control I caused the "lure" to volplane toward the creek and then with a tailspin and a nosedive it gracefully plunged into the water; right into Sherman's Creek where the towering cliffs cast their shadows over the deep pool in which the "big fish" held sway.

Strange to relate, all of the other bugs, beetles, flies and "what not," accepting the challenge, did likewise. In a second the placid waters were in a whirl. Up came fish—fish by the dozens, hundreds, thou—at any rate, a lot of them, splashing joyfully, they flopped in transports of delight. Never before had there been such a banquet in Sherman's Creek.

My super-lure, after hitting the water in its own graceful and delightfully scientific manner, that was equal to the cast of the most experienced angler, stood out for a fraction of a moment in bold relief among the churning throngs.

While up from the depths came the "big fish"!

I hesitate to state its size and bulk and breadth, but believe me or believe me not, never before had there been such a fish as this seen in Sherman's Creek.

As it struck, I struck, and the reel sang—the waters boiled and then—alas; I am mortified to say, folks, that in my eager hopes for the success of my lure in relation to insects—I had forgotten to include a hook in "Its" anatomy.

Let's Get Ahead of Our Kids

By Governor James H. Duff

The purpose of the Indiantown camp for kids is to give to youngsters who would ordinarily never get one, a real Summer vacation.

Out at Indiantown Gap, 20 miles east of Harrisburg, the Commonwealth of Pennsylvania owns 65,000 acres of ground. On this land are two lakes, a fine stream, three mountain ranges, wonderful woods, all the wild animals native to Pennsylvania. It also contains many fine playing fields.

It is an absolutely ideal place for sport, for recreation, and as a locality to show Pennsylvania at its best. It will also give the youngsters a chance to know by seeing in the flesh the wild life of Pennsylvania.

The United States Government and the Commonwealth of Pennsylvania together have invested about eighty-five million dollars in this property. It has a vast number of barracks and other buildings including recreation halls, churches and auditoriums. The property is used only one month out of 12 for military training.

It seems a shame to allow these vast resources to lie idle and go to waste for 11 months of the year.

Last year, the American Legion, under the direction of Gen. Frank A. Weber, the Adjutant General of the Commonwealth, had a "Guinea pig" camp for 400 boys selected by the Legion throughout the state.

This camp was a tremendous success. It did a vast amount of good. All the boys who attended it were extravagant in their praise both of the pleasure and benefits of fine associations in such a wonderful background.

All this led to the idea of giving kids in Pennsylvania, who normally would have had no chance of enjoying such an opportunity, the chance of getting it. Thereupon, the plan was developed to bring 2500 boys, without respect to race, color and creed but only on the basis of their being Pennsylvanians, to this camp for two weeks this Summer.—(*From the Pittsburgh Press*)

Fish Around for Bass

By Dick Fortney

THE more water you cover, the more successful you are likely to be when on a bass-fishing expedition.

The still-fisherman catches bass, of course, but his success is limited by his habit of covering only a comparatively little area. The same handicaps is risked by the plug caster or fly angler if he confines his efforts too much to a limited section of water.

But the fisherman who keeps moving along steadily—whether he is fishing a creek, a river, or a lake—usually gets the most action.

This is due, principally, to one characteristic of the bass itself. This species is a lone wolf. It does not gang up with others of its kind, like walleyed pike and certain species of panfish do. It likes to hunt out its own favorite haunts in a stream—and, incidentally, it is prone to resist fiercely an intrusion on its privacy by some other fish.

At the same time, the bass is not particularly fond of roaming around in its watery abode. It is far more likely to choose a resting and feeding place and to stick pretty close to it. The exception to this rule, as every bass angler knows, is the habit of the fish to explore shallow waters in search of food in early morning and at evening time.

This kind of behavior on the part of the bass forces the successful angler to go in search of the fish instead of (as in the case of the still-fisherman) waiting for the fish to come to him.

The job is easiest of all for the fishermen who angles for bass in creeks. The river fisherman has more of a problem to solve, and the lake angler is called upon to use the greatest skill of all.

Any part of a creek that contains deep enough water or sufficient cover may yield a nice bass. So the simplest rule to apply is to fish all of the water. That means giving every riffle due attention and it also means exploring the whole of every stream pool.

Consider the riffle first. Bass are not generally regarded as fish which feed in riffles, yet the smallmouth is a lover of fast water, at least part of the time. So he is likely to be found, hungry, in a riffle which contains some kind of a pocket big enough to harbor him. And most riffles worthy of the name contain such pockets. It surely is worth while to drop a bait or a fly or spinner in such locations, especially since they can be easily detected by the observing angler.

The stream pool is a more complicated problem. But there are some easily detected areas which deserve special attention. For example, rocky formations, sunken logs and stumps, cut-under banks, areas where aquatic plants thrive—these all are typical bass hangouts.

This angler knows that bass often move into the head of a pool and take food carried to them by a riffle.

Shorelines which have a fair depth of water deserve careful attention, too, for these are favorite bass feeding areas.

But even the depths of the pool should not be neglected.

I recall one morning fishing a favorite bass pool and putting all my efforts into getting a fly and spinner in close to shore in the shadows of thick vegetation that grew along the shore. This always had been a hot spot in this particular pool.

But this morning there was no action. Thinking that perhaps the spinner was not working properly, I cast my lure upstream into clear water. in the middle of the pool and began retrieving it, with the revolving blades in plain sight.

I got the surprise of my life when a darned nice bass appeared out of nowhere and grabbed that spinner and fly as if it were starving. It turned out to be the biggest bass caught all day.

If the creek is small enough, the angler will do well to keep out of the water as much as possible, traveling along the least likely shore and fishing toward the opposite bank and in the middle of the stream. If the creek is broad, it is a good idea to wade down the middle of the pool, if possible, and fish both shores. If water depth makes this method impossible, all the angler can do is to try to cover as much area as possible from the most advantageous position into which he can wade.

Let us consider now the river bass angler. But it will not be necessary to climb into a boat right off the bat.

The angler who wears waders or who doesn't mind getting wet (hip boots are out of the question) can have a lot of sport wading a river. He can explore it much as the creek angler explores creek pools and riffles.

I have a friend whose favorite system is to hunt out an island where there is fast water within reach. He likes to walk or wade along the shores of the island, fishing out into the river —and he comes up with some nice bass to reward his efforts.

The angler afoot also can have a lot of fun at riffles, and he must remember that in the river the riffles will be heavier and deeper than in a creek—and consequently more likely to contain bass.

There are two ways of fishing a river riffle from a standing position. One is



Patches of lily pads and other vegetation are favorite feeding places of bass in lakes.

to cast the bait or lure well upstream, so that it sinks down to the fish as it floats along. Another is to get the bait or lure downstream and work it slowly back up the riffle.

When it comes to use of a boat for river bass angling, far too many fishermen are satisfied to anchor in what they consider a good spot, and then either to dangle bait in the water or cast artificial lures around them for hours on end.

The secret of successful river fishing from a boat is to keep moving. Drift fishing and shoreline angling are the favorite methods.

In drift fishing the angler gets his boat well up in the fast water at the head of a pool, then keeps busy fishing as the current carries his craft down the length of the pool.

If he is using bait, the best method is to cast the bait behind the boat, with a fairly long line, and then allow the bait to drag along in the water as the boat drifts. Slow current will cause the bait to bump on the bottom, and the angler must learn to know, by the "feel," whether his bait has snagged or a fish has taken it. This method not only covers the water well, but also it keeps the bait moving, and the net result is increased action on the part of the fish.

Drift fishing obviously is especially good if the water is low and clear, provided the angler uses a long line and a fine leader.

The angler who fishes from a boat with artificial lures follows much the same pattern, so far as the boat is concerned. But he casts his plugs or flies to the shore lines, eddies, and other spots where fish may be lying in wait.

He may have to "steer" his boat more than the bait angler does, in order to reach these particular spots, but the main result is the same—he, also, covers a great deal of water in his fishing.

The lake bass fisherman faces the toughest problem of all—but he finds some relief in the fact that the bass he seeks are not so apt to be roaming around in lakes as they are in rivers and creeks.

Rather, the problem of the lake angler is to learn the bassy spots and to cover them, one and all, thoroughly in the course of his angling.

Shoals which slope off into deep water are good bass spots in any lake. Patches of muddy bottom, with plenty of lily pads and weds, attract large mouth bass. Gravel beds are favorites for small mouths.

Bays along lake shores usually provide good fishing, especially if they contain stumps and weed growths or if they are overhung with vegetation.

At certain times of the day, especially in the evenings, bass are in the habit of moving into shallow areas to feed on minnows or on insects that are to be found on the surface.

Lake fishing, also, presents the problem of water depth. Bass may be feeding near the surface at one time, on the bottom another, and somewhere in between at other times. The angler must experiment until he finds where the fish are, and then work his bait or lures on that level.

The lake fisherman, further, must handle a long line, so that he can keep his boat as far as possible from the locations where bass are to be found. He must at the same time learn to manipulate his boat quietly and with care to avoid frightening the fish.

Few anglers may give it any thought, but actually it is possible to use the drift fishing method on lakes as well as on streams.

The angler needs a bit of wind for this maneuver. He gets set in his boat, then allows the wind to move it across the water while he keeps busy fishing.

If the wind is contrary, the angler sometimes has a lot of trouble with his boat getting into the wrong places and missing what he considers to be the good spots.

But it is worth trying as another method that enables the bass fisherman to go in search of the bass instead of waiting—and hoping—for the bass to come to him.

Colored Nylon Now Available

Camouflaged nylon monofilament leaders, tippits, coils, and spinning lines are now available. They are dyed the colors of the rainbow by a special process. The colors are in the order in which they appear in the spectrum, and this feature, according to the manufacturers, aids in making them virtually invisible.

The leaders are offered in either level or tapered forms in a wide range of test weights. Spinning lines come in two-, three-, four-, five-, six-, seven- and eight-pound tests and coils in ten-yard lengths and up.

Dr. E. C. Raney of Cornell to Survey Stripers Along Coast

Dr. E. C. Raney, associate professor of ichthyology at Cornell University's Department of Conservation, has been engaged by "The Saltwater Sportsman" and the Massachusetts Fish and Game Association to spend this summer in collecting all available information on the striped bass, the Wildlife Management Institute reports.

Dr. Raney will visit all of the research centers, from Maine to North Carolina, which are known to have investigated this species, with the objective of reviewing the status of past and present research on the striper and to propose an outline for further research. The two agencies which are sponsoring the survey hope that, by this means, it will be possible to stimulate research on striped bass in directions where immediate action is urgently needed.

Warden Singer Reports:

I checked a fisherman July 4th on Lake Wallenpaupak who caught 24 pike and kept 4 over 22 inches each. He caught 5 small mouth bass and kept one. White Deer Lake has produced some very fine bass this season. I saw three that went over 5 pounds each.

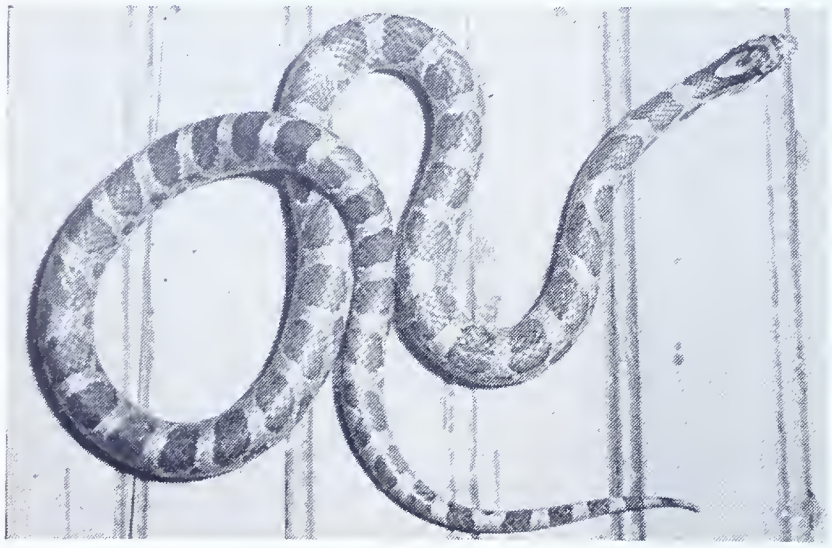
To date I have shot 7 rattlesnakes, 103 watersnakes and 5 snapping turtles.

PENNSYLVANIA REPTILES & AMPHIBIANS

A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

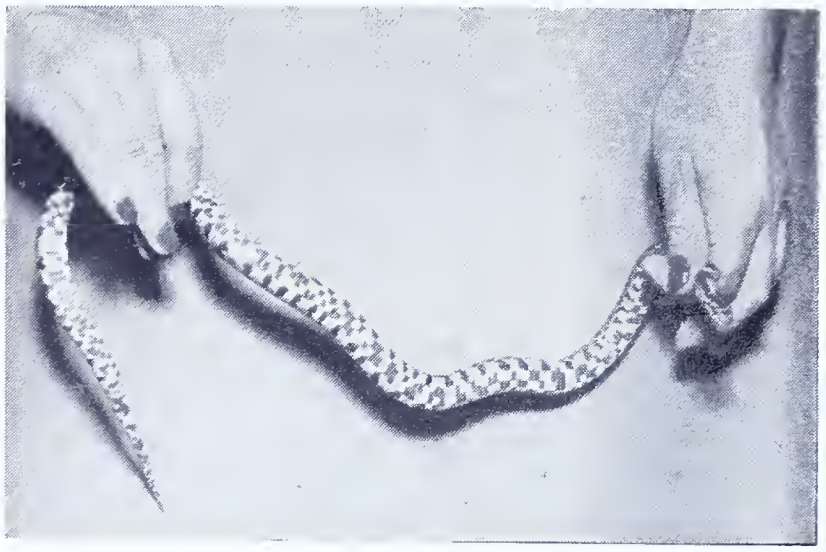
No. 5 . . . Snakes



UPLAND HOUSE SNAKE (Lampropeltis triangulum triangulum) . . . Maximum length 3 feet, 6½ inches; sometimes called "milk snake" because of false notion that it milks cows; marked with brown or red-brown blotches above and a black and white checkerboard pattern on its belly; feeds largely upon rodents and other snakes; lays eggs in June or July; young are brightly patterned little "spotted adders"; generally distributed throughout the state.



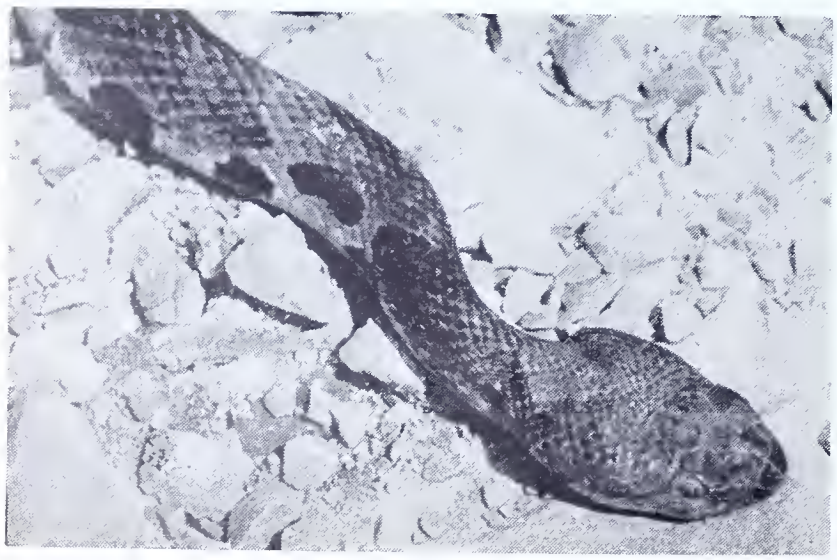
NORTHERN COPPERHEAD (Agkistrodon mokeson mokeson) . . . Maximum length of Pennsylvania specimen 42 inches; average length about 30 inches; member of the pit-viper family and highly poisonous; largely nocturnal in its habits resulting in comparatively few accidents despite its prevalence, even in urban areas; principal foods are mice, frogs, birds; Pennsylvania females produce from 4 to 9 young in August or September; recorded from 54 counties; rarely found in glaciated areas.



BELLY OF A HOUSE SNAKE . . . No snake is mistaken more often for a copperhead than the harmless and beneficial house snake; the checkerboard belly of the house snake is one outstanding difference in the two species; its scales are smooth and polished, distinguishing it from the rough-scaled copperhead; should be accorded protection as a beneficial species.



BELLY OF A COPPERHEAD . . . The checkerboard pattern of the house snake is entirely lacking in this species; the copperhead is the only local snake which has triangular brown or red-brown blotches along each side of the body, WITH THE BASE OF THE TRIANGLE TOWARD THE GROUND; when the hide of a skinned copperhead is flattened, the triangles form an hour-glass arrangement.



HEAD OF A COPPERHEAD . . . Triangular-shaped; plain coppery-red; like all pit vipers, it has a pit on each side of the head between the eye and the nose; potentially dangerous, but it is so secretive that it rarely bites anyone; young are born fully equipped with fangs and venom and are dangerous in proportion to their size.



CATCHING A COPPERHEAD . . . Two Pennsylvania snake hunters, Fred Weimer, Laughlintown, left, and Steve Harwig, Pittsburgh, catch a copperhead in the Laurel Mountain region of Westmoreland county; these snakes are feared out of all proportion to few accidents they cause; when in snake-infested country, wear stout boots and carry a suction kit for treatment if bitten.

Carp Are Highly Prized In Many Countries

Carp, the hardy fishery specimen known to commercial fishermen throughout the Great Lakes area, is about the most misunderstood fresh water fish in history. This big amiable inhabitant of our lakes who has lived around the world during the last 2,000 years and minded his own business wherever he made his home, is an outcast.

Any youngster who is brought up where fish are abundant in their natural home, rivers and lakes, soon learns that carp are to be looked upon as pests who have no food value, and are just a generally no good fish cluttering up the place. This misunderstanding continues through adulthood and as a result the carp is relegated to the background in the eyes of the public.

Actually, the carp has attained a position of prominence in many countries and is gaining considerably in this country as a resource for canned fish. Even the life history of the carp is filled with interesting sidelights.

The beginning of carp date back to some 2,000 years ago when China was their home. The ancient Chinese raised carp much the same as we would cattle, or pigs, or chickens, and it became a staple food in a country where starvation is always lurking around the corner.

As early as 600 A. D., carp had been transplanted to European waters and reached the dinner tables of countless thousands on the continent. By the 13th century, carp raising had become quite an industry in the Old World and soon England also had its "carp farms." German families raised carp in private pools for their own table use and considered it a delicacy.

It was natural that this species would find its way to the New World and it was introduced to the United States in 1876. Great Lakes fishermen took their first catch of carp in the 1880's and during the period of 1913-1915 the average take from the lakes was about 8 million pounds. This average had fallen off in later years but has held steady around 5 million pounds annually for the last 14 seasons.

Quickly adapting itself to its new surroundings in the lakes, the carp multiplied rapidily and is now widely distributed. The carp industry might have expanded to greater proportions during past years had it not been for a very limited demand due, in part at least, to the misunderstanding that the carp was not a very tasty or desirable fish. Carp, as a resource, could have supported a larger fishery with little fear of over fishing but the lack of demand made such commercial fishing unprofitable.

Another reason for the apparent lack of popularity of carp has been the neglect to process this specie of fish in any manner. Even though the carp was fished and raised around the world for centuries, it was always sold as fresh fish in the open market and never canned or smoked. If the fish had to be transported, they were carried alive in tank cars and then sold to market upon arrival.

It took the Second World War before the carp came into its own as a more useful fishery product. It was 1945 when the U. S. Army was searching for economical, easily processed, easily shipped products that the capabilities of carp were developed. This research discovered that carp was high in protein content and the process of canning carp came into being.

The first canning of carp, done in Minnesota, presented many problems. No fresh water fish had ever been canned before to any extent. The salt-water process of canning used on the carp proved to be unsuccessful and an entirely new method had to be formulated. But the final result was a flavor much like tuna or the white meat of chicken.



Walter Barish, Jr. of Portage and four large carp taken from Wilmore Dam. The carp's reputation of being undesirable prevents many anglers from enjoying a sport with many thrills.

The ability of the carp to live despite hardship of extreme heat or cold has always come in handy when transportation troubles arise but this same ability has been the chief reason for the slowness of the fishing industry in turning it into a canned product. Carp have sometimes even been shipped while packed in just moist moss and arrived at their destination days later without losing weight.

Another amazing aspect to the carp is their length of life. It is thought not uncommon for the carp to live to an age of 150 to 200 years. Most logical reason for this long length of life is that the carp does everything at a low rate of speed and wastes no energy. He thrives in warm waters and if the temperature of the water gets below 50 degrees the carp very simply does nothing. He doesn't move, he doesn't eat and he doesn't lose weight. Once the temperature gets above 59 degrees the carp comes back to life but takes things easy.

As a result of this lack of movement and calm way of life most of what the carp eats goes for body growth and they may attain a weight of 100 pounds or more. This efficient method of putting on weight means that a high poundage can be raised per acre to make "carp farming" profitable.

Carp feed on plants and small animals such as shellfish, insect larvae and crustaceans. They spawn in May and June and the female often lays 24,000 eggs for every pound of her weight.

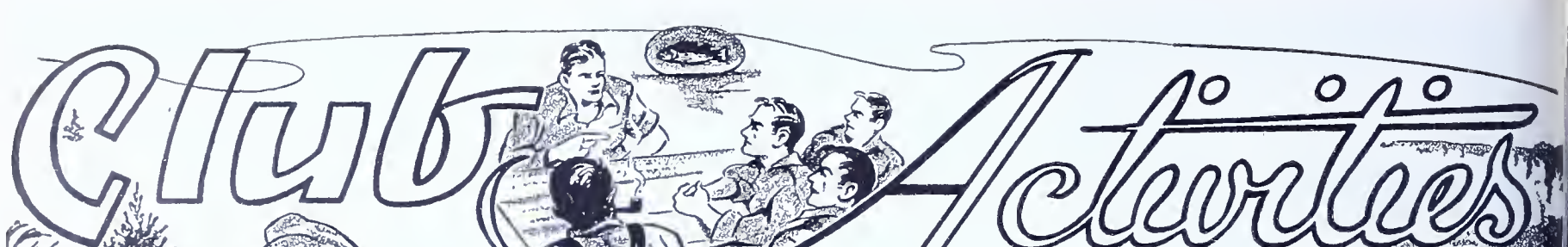
Carp are also taken in the Mississippi River and its tributaries amounting to about 10 or 12 million pounds a year.

The biggest yield of carp among the Great Lakes in 1944, latest year on which official statistics are available, came from Lake Erie where close to two million pounds were caught valued at $71,797. The state of Ohio profited most from the Lake Erie carp yield as her fishermen's catch was worth $53,076.

Second best among the lakes producing carp was Lake Michigan which netted 1,217,100 fish but their value was greater than that of Lake Erie as they sold for $84,075. Here it was Wisconsin that laid claim to the chief production of carp among the Lake Michigan states involved as they accounted for $81,352 of the total value.

Haul seines proved to be the most effective method of capturing carp, especially by Michigan fishermen who netted 1,188,300 pounds in this manner. Trap nets were the next most useful in bringing in carp with fyke nets, pound nets, and trot lines used to a small extent.

The Commercial Fisherman



Delaware County Assn. Reports on Contest

The Youth Educational Committee of the Delaware County Field and Stream Association, Inc., recently concluded a contest among its Junior members and the results were tops.

The contest was started last fall with registration and written consent from the boys' parents for them to participate for the prizes. Points were given for making bird houses, working on the club's pheasant pens, application for rabbit traps, trapping rabbits, trapping or killing predators, returning rabbit traps promptly after the trapping season, attending the school of instruction on the identification of fish and the fish laws, attending the school of instruction on game and game laws, and lastly, a written examination covering questions that had been discussed in either the fish or game classes, and an essay on conservation and one on sportsmanship.

Conservation, good sportsmanship, and the safe handling of firearms had been stressed all through the classes at every opportunity.

The boys trapped fifty-four rabbits and were paid for these by the Game Commission, and the committee paid them for the ten opossums, in addition to the points for each.

Hawks and owls were not among the predators due to so many of them being protected, but crows, water snakes, and snapping turtles were among the point winners.

The twelve winners are as follows: Westley Simmons, of Sharon Hill, who scored the most points to win a ten-day trip to the Conservation school at State College with all expenses paid; James Goodyear, James Smith, and Manfred Haiges, who each won a trip to Thurmont, Md., to the Jungle Cock outing of three days with all expenses paid. The next six, Edward Cape, John Turner, Edward Reading, John Tomlinson, Roger Ruth, and George E. Grosser, Jr., won a one-day tuna fishing trip from Ocean City, N. J., sponsored by Capt. C. E. Lent, one of the members, and the date set for the event is August 2nd. The other two boys, William M. Tomlinson and Lawrence Frances, were awarded a rod and reel and are to be taken on a fresh water fishing trip by past president, Harry Sauers, and Jack Meehla, chairman of the Game Committee.

Next year the club is planning on much more interest from the Juniors and are sending ten boys to the Jungle Cock and others in proportion, with enough prizes to satisfy all. Bob Yake, '49-'50 Chairman, is planning a banner year and under his very able direction they are sure it will be tops. Bob is Chairman of the State Federation Educational Group, and Elwood Casey spent several years in the Academy of Natural Science and is able to describe the different methods of identifying more fish than most people know exist in both fresh and salt water.

James Knorr, of the committee, who was ill at the time the picture was taken, is very much interested in our young sportsmen and is a valuable worker along these lines.

We would like to see every club in the state start something for the Juniors. Many have, but there are many more that can do a lot to help the boys out and get a lot of real pleasure doing so.

L. F. (Shorty) Manning, Chairman
Your Education Committee



The photograph shows the winners and the committee. From left to right standing, rear row: Robert Yake (Committee), Manfred Haiges, Westley Simmons, James Smith, James Goodyear; Middle row: Edward Reading, John Turner, John Tomlinson, and Roger Ruth; Front row: Lawrence Frances, George E. Grosser, Jr., and William Tomlinson; Sitting: Elwood Casey (Committee), Edward Cape, and Shorty Manning (Chairman).

Franklin Co. Chapter I.W.L.A.

After a thorough and detailed study by a committee headed by J. Hase Mowrey, the Franklin county chapter I. W. L. A. at Chambersburg went on record urging the borough of Chambersburg to use extreme care in its use of DDT in controlling mosquito pests in and about the town. Consultation with wildlife biologists, entomologists, and insecticide manufacturers indicated that considerable danger might accrue to terrestrial and aquatic wildlife in the area through indiscriminate use of this powerful poison. A full report of the chapter's findings is available at national headquarters for the use of other chapters similarly interested.

Carlisle Fish & Game Association

The Field Day Committee of the club at the regular meeting held recently at the game farm along the Trindle Road announced that the date for the All-Cumberland County Outdoor Sporting Day has been set for Saturday, September 17, with a rain date a week later, September 24.

Engaged in Stream Improvement



A group of Junior Members of the Tri-Valley Outdoor Club of Weatherly, Pennsylvania, under direction of Secretary, Theodore Koehler and his brother, Donald Koehler, spent a very useful day improving a stream for better fishing at Dark Hollow. They were guided by a regular improvement chart from the Fish Commission.

The boys worked like mad beavers, and did a splendid job. This improvement will be a benefit to everyone concerned, the objective is to put these streams in condition for the local children.

After the project was finished, pictures were taken and all enjoyed eats. Following eats the boys fell in line for the hike back to town, well pleased with their days work.

Holmesburg Fish & Game Prot. Assn.

Sunday, October 2nd, has been the date set by the association for their annual fall outing. Rain date was also announced for Oct. 9th.

The club grounds are located on Pennypack Street and State Road in Philadelphia. A grand prize drawing with a long list of valuable items is also in the making.

Keystone Fish & Game Prot. Assn. of Shamokin

The club is very much interested in the problem of providing means by which migratory fish can get around or over the dams in the Susquehanna. They would like to correspond with anyone having any knowledge as to how such means for the free migration of fish in the river can be provided.

Union County Sportsmen's Assn.

At the June 25th meeting of the Union County Sportsmen Assn. the date for the annual picnic was set. This year the event will occur on August 6th and will be held on the grounds of the Association near Weikert. Activities during the day will include a ball game, fly casting, skeet shoot, games for children, a band concert and many other events, including a dog show.

Sportsmen's Clubs Mourn Capable President

Death of Fred E. Weller, Jr., president of the Lackawanna County Federation of Sportsmen's Clubs, charter member, a past president and for some years secretary of the Willow Rod and Gun Club, is definitely a loss to the cause of good sportsmanship, conservation and the promotion of better hunting and fishing.

Fred, through the years as a member of the South Scranton Willow Club, was always active and did more than his share to keep the organization among the largest, most active and best financially in the Lackawanna Valley. Every occasion, whether it was a deer hunt, vermin hunt, an outing or a banquet, Fred was in the center of all activities, striving to make the event a success.

Three years ago Fred was elected president of the Lackawanna County Federation of Sportsmen's Clubs. At the time of his taking office the first year the membership roster numbered not more than 400. Under his able leadership the membership has grown to more than 3,000, with practically every individual fish, hunting or conservation club in the county becoming enrolled. And two annual banquets and other affairs in his presidential regime have proven successful.

Fred, through his earnest and sincere efforts to improve hunting and fishing in Pennsylvania, earned the high regard and respect of members of the State Fish and Game Commissions.

To people in conservation affairs, Fred's untimely death, at too early an age, is a severe shock. His pleasant personality and sincere efforts to continually build the organizations of which he was an officer and hard worker so they might function successfully are qualities that will long be remembered.

Fred died Sunday morning, June 26th, in St. Mary's Hospital where he had been a surgical patient for three weeks.

Scranton Times

Renovo Schools, Sportsmen Teach Boys to Fish



Fish Warden George Cross and a group of apt pupils.

Renovo boys between the ages of 10 and 13 are learning to become expert fishermen under a program originated and carried on by the Renovo public schools.

The program was begun when two boys who had moved to Renovo said they wanted to fish but knew nothing about the sport. Arrangements were made to take the two youths to a stream under the guidance of several high school boys.

From this was born the idea of giving class-room instruction to boys 10 to 13. The teacher is Henry M. B. Weicksel, a member of the Renovo High School faculty and president of the Western Clinton County Sportsmen's Association.

Instruction covers the rod, the line, the leader, the hook, the bait, how to approach a stream, where to look for trout, etc.

After several class-room meetings, more than 20 boys were taken to a branch of Young Woman's Creek in a bus donated by James Connolly and there were given practical fishing instruction by Mr. Weicksel, James Smith, Leonard Wood, the Rev. Mr. Goss, and Fish Warden George Cross.

Others who have given individual instruction to the youthful anglers are Clarence Harlan, Edward Wagner, and Paul Ericson.

Used fishing equipment has been donated to the boys by Renovo sportsmen, and plans are now under way to stock two miles of a nearby stream and restrict the area to boys of under-license age and to women.

The Renovo schools also have announced a class in the care and use of firearms for this fall. Further, a class in fly-tying is scheduled before the trout season opens in 1950.

What's New in Fishing Books

Reviewed by Hugh Johnson

In spite of the fact that, as I write these words I am on a bass fishing vacation on Cape Cod and having a wonderful time, (although I miss the Pennsylvania streams) catching scrappy smallmouths from the deep, cold, clear, fresh water ponds in the Falmouth area, I still am in a rather poor position to review John Alden Knight's excellent new book, *Black Bass*, (G. P. Putnam's Sons, New York, N. Y., $4.00). The reason for this is that, while my evenings have been spent in reading *Black Bass*, my days have been largely dedicated to catching those famous leaping-lightning Cape smallmouths with bait, live bait! Mr. Knight's attitude toward bait fishing is unequivocally stated in his short, after-thought, last chapter—Bait Fishing for Bass (15 pages out of 220). He says, "I have absolutely no use for bait fishing." Period. And I respect him for it, I suppose.

But here am I catching smallmouths with two-inch-long salt water shrimp (the standard bait for smallmouths on Cape Cod), drifting and still-fishing in a canoe along the drop-off edges of these gin-clear ponds. I invite Mr. Knight's partial forgiveness on the basis that I am using #10 trout fly hooks, 12′ leader tapered to 3x and a 4-ounce fly rod. With or without his forgiveness, however, I'll continue to stalk the Cape Cod smallmouths in this manner until Mr. Knight or somebody else demonstrates that just as much sport can be had and just as many 2 to 4 pound bass caught on plugs, flies, or "poppers" as on shrimp!

Pennsylvania bass fishermen will get many good tips and fish-catching information from *Black Bass* because Mr. Knight's emphasis is on river fishing and much of his experience has been on the North Branch of the Susquehanna River. The Table of Contents provides a clear idea of the comprehensive coverage of *Black Bass:* The Yearly Cycle, Characteristics and Behavior of Bass, Food and Feeding Habits of Bass, Bass Rods, Bass Reels, Bass Lines and Leaders, Bass Lures, Incidental Equipment, Fishing With the Casting Rod, Fishing with the Fly Rod, General Discussion, Bait Fishing for Bass.

Largemouth and smallmouth are treated with equal authority and respect, and this 220 page book (plus 21 pages of color and photographic illustrations) is a well-balanced (yes, he does tell how to put a hook into a minnow, a crawdad, and an angleworm), readable exposition by a man whose very name has come to mean authority in American angling. John Alden Knight is the author of many good books, and perhaps his biggest splash was made and his most promising claim to fame staked out, with his development of the Solunar Theory and the fishing tables based on this pull-of-the-moon idea. *Black Bass* is certainly on a par with *Lucas on Bass Fishing* by Jason Lucas (reviewed in Pennsylvania ANGLER for March), and for Pennsylvania fishermen who do most of their bass fishing on rivers, it is probably the more useful of the two.

Did you ever fish for smallmouths on Cape Cod, Mr. Knight?

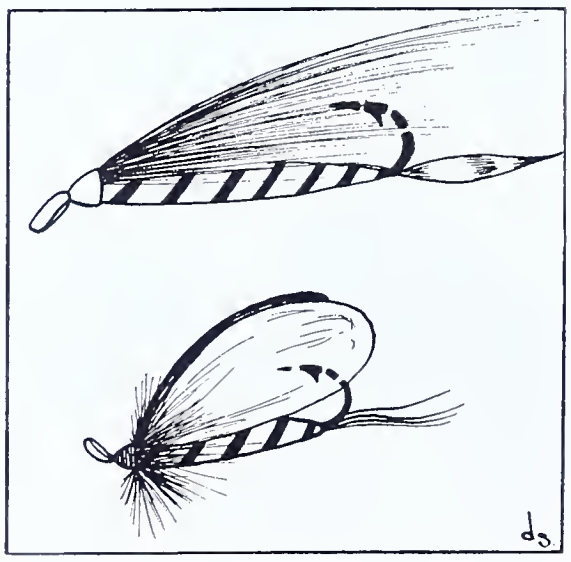
Weedles Flies

By Don Shiner

Flies which are used in weedy waters generally manage to become ensnarled in grass, lily pads and other debris. This not only causes the angler considerable trouble of cleansing the fly after each retrieve but also causes the fish in the vicinity to become suspicious and scared. Game fish, it seems, will readily accept our artificial flies providing they are clean and free from foreign matter, however, if the fly has picked up a blade of grass or moss, it generally is refused. This goes for spoons, spinners, and plug lures.

To overcome this, the flies should have the wings of feathers or hair stream back over the point of the hook. The point and barb of hook then rides in the water pointing upward and easily skims through the weedy water. Flies tied in this manner are just as effective, if not more so, since they generally remain free of particles of weeds and grass. It does not hinder setting the hook in a striking fish as the hair or feathers are pliable and give away under the slightest pressure.

A few weedless flies similar to those in the illustration should be among the fly collection, however, if they are to be used in connection with a spinner make sure they have straight ringed eyes rather than the eyes turned up or down. Unless the eyes are straight the flies will ride at a cocked angle behind the spinner and will not wobble, weave or shimmy freely when retrieved.



"Dear Editor . . ."

Thanks for the Channel Cat

Marietta, Pa.

Dear Sir,

Many thanks to the Fish Commission for introducing the channel cat to the Susquehanna River.

With the increased pollution in recent years, the bass and salmon population of the river in this area is fast dying out. These species are gradually being replaced by the hardier channel cat which seems to thrive well here. Holes which in previous years always produced salmon and bass are now producing channel cats and the situation is improving all the time.

While not considered a game fish, the channel cat certainly puts up as good a fight as a walleye of the same size. They strike a live minnow with the same ferocity as a bass. I have taken them on all kinds of bait including deep-running plugs. They seem to prefer fast, deep water and are providing excellent sport in an area of the river which now has the reputation of being "fished out" as far as game fish are concerned.

Very truly yours,
Vincent F. Acri

• • •

Where Fishermen Come From

W. Williamsport, Pa.

Dead Editor:

Am attaching check in the amount of one dollar ($1.00) for two (2) year's subscription for the PENNSYLVANIA ANGLER for Robert Baker, R.F.D. 1, Linden Pa.

I would not be without this magazine, which is the best of its kind for anything. My boy and the writer read the ANGLER from cover-to-cover and get a wealth of information and excellent reading matter from its pages.

My boy was not interested in fishing until I subscribed for the ANGLER and now he is very much enthused.

Yours very truly,
Harry M. Miller

Warden White Reports:

Some of the largest trout reported caught in my district so far this season, were as follows:

Mike Orlando of Mahoningtown, a Brown, 23 inches, 4½ pounds, from Slippery Rock Creek; George Lanning of New Wilmington, a Brown, 22½ inches, 4½ pounds, from Pine Run; Ralph Book of New Castle, a Brown, 22 inches, 2¾ pounds, from Slippery Rock Creek; Jesse Moore of Sharpsville, a Brown, 21 inches, 3 pounds, from Pardoe Creek; James Kays of Volant, a Brown, 22 inches, 2½ pounds, from Neshannock Creek; Harry Macom of Sharon, a Brown, 21½ inches, 2¾ pounds, from Neshannock Creek.

In using a spinner fly with long, flowing hackles, stop the fly for second or so occasionally. Fish often will strike at the lure the moment it stops. It is likely that the action of the unfolding hackles induces the fish to action.

WHY BOTHER

(*From page* 1)

everlasting earth-fact; and we are to forget it only at our grave peril.

Conservation has to be an all-over mood. The ivory-billed woodpecker may not, in itself, be immediately linked to our human destiny. But the general health and flourishing of nature, in all its parts and aspects, is of the most enormous consequence to us. Our life hangs on it. And in the natural totality, the ivory-billed woodpecker is one part. Conservation, as I say, is a whole mood. It is a whole habit of mind and way of thinking about things. When we have it, we cannot be casual about ivory-bills or cranes, or for that matter about the treatment of the commonest sparrow or the drainage of the littlest swamp. For we know that everything goes together. We think in terms of the general brotherhood of all the natural world, of which we are ourselves a part. And we know, as sober fact, that violence to the texture of the brotherhood is violence that returns upon ourselves. We do not forget the vision of the end of a hideous road: the barren soil, the parched and unproductive earth, the spread of the deadly desert.

All this, I take it, is the practical reason why in an age of large political and economic alarms, we go on bothering about a mammal here and a tree there and hunting season the year after next. But I take it, also, that we are not concerned solely with these grimly practical considerations. I think we are concerned also with a kind of consideration for which the only term, perhaps, is spiritual. "Spiritual" is a rather dreadful pious-sounding sort of word, calling to mind a churchy stuffiness. I do not use it to suggest anything like that. What I have in mind is a sort of piety that precedes all specific creeds. What I am speaking about is the sort of religiousness that can be characterized simply by Albert Schweitzer's homely phrase, "reverence for life." It is bound to go with conservation mindedness.

Looking on the creation, watching dawns and sunsets and the shining silver of the rain and the white hush of the snow, we are moved to an awed wonder. Here, before us, is something very like a miracle. Here we stand, in receipt of the fabulous gift of the life-experience, privileged to hear midnight owls, privileged to breathe the smell of the fresh earth wet with rain, presented with the loveliness of birds and the astonishingness of mud-turtles and the splendor of the sun. A reverence is upon us, and gratefulness and humility. We are made to feel, without any stuffy moralism about it, that it devolves upon us to do our part as stewardly protectors of this astonishing creation, for which the legendary symbol is a Garden. We are touched with something of the awe and homage of old Adam. We would show forth our thanks. We would express our cherishment, for ivory-billed woodpeckers and whooping cranes and all the whole great shining singing Garden, from the glittering star in the night sky to the white-footed mouse inhabiting our woodpile.

It is hard to write about this second part of our conservation-feeling without having prose turn into lyrical mush. The wonder and glory of nature are not readily run through a typewriter nor is it easy to speak of feelings of reverence and humility without sounding preachy and priggish. But what we mean, I think, may be discernible enough despite the necessary failure in the saying of it. I think that even the man who asked me the question that started this article will have no trouble understanding the implications of it.

He is bothered about the grave state of international affairs, and we seem to be largely bothered about the draining of swamps and the over-hunting of wildfowl and things like that. But he would agree, I think, that if the headlines are black and ominous, the taproots of the trouble go down and down to a failure of our sense of brotherhood, and down still further to a failure in our reverence for life and our sense of obligation. We feel exactly the same way. What we feel is just that the place to start—the place where the cultivation of reverence begins, and the place where the fact of brotherhood is demonstrably a scientific fact—is close to earth, in the context of the nature that produces and enfolds us all.

Special permission to reprint this article was granted the PENNSYLVANIA ANGLER *by the writer and the Audubon Magazine.*

Warden Wilcox Reports:

Sunday, July 3rd, a motor boat blew up on the river near Homets Ferry. It put one man in the hospital with second degree burns. As near as I could learn, when the gas tank blew up it threw him in the river.

78 Years and Still Going Strong



The ANGLER proudly presents herewith William A. S. McCandless of 679 State Street, Lemoyne, a veteran fisherman of some 50 years' experience. "Bill," as he is known to his friends including "Don" Yoder, "Bob" Yoder and Lenard Conley of the fishing fraternity, is held in high esteem by fishermen wherever he goes. The above photo speaks for itself in that the ANGLER has arranged the fishing licenses beginning with 1927 and continuing up to 1948 with the 1949 license on Bill's cap. He is an ardent trout fisherman, but finds much time to devote to the bronze back bass and some deep sea fishing. Bill prefers the Yellow Breeches and Silver Springs in Cumberland County for trout, while much of his spare time is spent along the Conodoguinet for bass and off the Atlantic coast for deep sea fishing.

An advocate of clean sportsmanship this patriarch of the outdoors has strongly advocated closing all streams in Pennsylvania except rivers, lakes and ponds not stocked with trout, one month before the season opens, which in effect was recently signed into law by Governor James H. Duff.

For sportsmen everywhere the PENNSYLVANIA ANGLER pays this signal salute of tribute to a grand old fisherman.

The Euglenas

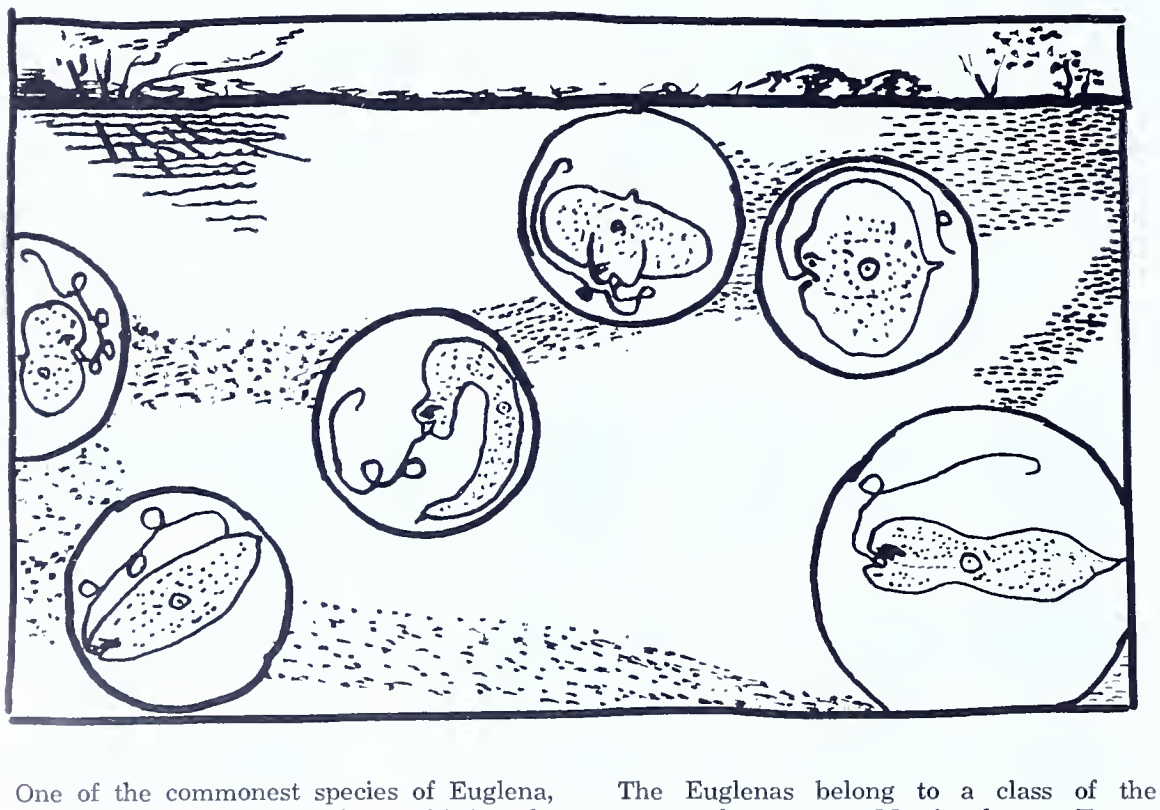
By Carsten Ahrens

Biologists have attempted to place all living things in two big groups: the plant kingdom and the animal kingdom. If an organism locomotes, if it responds quickly to a stimulus, and if it can't manufacture its own food, then the creature should be an *animal.* If it doesn't locomote, if it responds slowly to stimuli, and if it takes carbondioxide and water and from them manufactures its own food, the creature should be a *plant.*

Now there is a group of living things that respond quickly to stimuli and locomote freely. That should make them animals. But wait. These creatures that seem to be animals are green. They swim into the sunny patches in the shade of the overhanging willows where they manufacture food. That's a plant characteristic. They must be animal-plants, or plant-animals. And that is just what the Euglenas seem to be. They seem to be a link that joins the two kingdoms.

of this indentation, there is a peculiar reddish spot which might give one the wrong notion that the creature has an eye. (The word *Euglena* comes from the Greek meaning "good eye.") The red area has been proved, however, to be sensitive to light, and is believed to aid the organism in locating itself where the light is neither too bright nor too dim. You'll look in vain for a brain. About in the center of the body is the nucleus which is usually quite evident. But the creature is unique because it is peppered with minute green bodies; these are the foodmaking machines

Euglenas seem to lack sex. Reproduction is merely a matter of cell division . . . of splitting in two. Some of their one-celled cousins, like the Paramecium, twist in two across the middle. In a Euglena, the division is always longitudinal. The split starts in front, so for a while the creature seems to be two-headed.



One of the commonest species of Euglena, and they're found all over the world, is only 1/300 of an inch long. But although they are tiny, they are often so numerous that the pond or pool in which they have lived for a time appears to be dyed a euglena-green. If the surface of the water is mottled with sunshine and shade, the sunny patches are a bright green, strikingly different from the shady areas. The plant-like Euglena cannot manufacture food unless it is in the sunshine, but being also animal-like, it can locomote and follow the sun around. To a hard-working Joe, it all seems like an ideal arrangement. Swim out into the sun, bask in the rays, and let the chemistry of carbon-dioxide and water and old sol provide your nourishment!

Few creatures are as restless as this plant-animal. It is spindle-shaped and is equipped with a long whiplike organ that provides locomotion by twisting, writhing, and twining from the anterior end. Often this flagellum is twice as long as its owner. This whip is anchored in a depression that gives the false impression of being a mouth. At one side

The Euglenas belong to a class of the protozoa known as Mastigophora. Fortunately they are free-living and furnish food for tiny fish. Unfortunately they have many relatives that are internal parasites in man; they are responsible for many of the most dreaded diseases of the tropics.

Now It's Flies From Nylon

A new and effective method of trout fly tying has been developed by Glen L. Evans, Inc., Caldwell, Idaho. In one line of flies, called the "Nylo-Tribe," the entire fly, including body and hackle, is made of a special small diameter nylon monofilament. The "Nylo-Tribe" line consists of 10 patterns, all of which are intended for under-surface fishing. They represent the nymphs and creepers found in trout streams.

Small nylon filament has all the attributes of hair, together with extreme wearability, resistance to water, and the ability to hold coloring. "Nylo-Tribe" flies have been used successfully in many western states.

THE FARMER AND POLLUTION

(*From page* 4)

Aside from the pollution which enters our waterways from industrial operations and from municipalities, great damage is done to our streams and to the farm lands through erosion. Silt from the lands not only clogs up the stream beds which causes floods; but it smothers aquatic life and therefore kills the value of the stream. And certainly of great concern is the fact that it takes from the farms the best soil, robbing the land of its productivity and must eventually if not stopped, bring economic disaster to our great agricultural enterprise.

Buffalo Man Enters Large Trout In Harger's Fishing Contest

The largest fish of the now past trout season was registered in the contest at Hargers store in Renovo, July 4th.

It was a 26 inch, 6½ pound brown trout caught by C. W. Burgin of Buffalo, N. Y., while fishing the left hand branch of Kettle Creek above Cross Fork. He was using a minnow for lure.

This edges out the speckled beauty for this class caught by "Bucky" Walizer at the mouth of Youngwoman's Creek earlier in the season.

Leave Something Behind

Wherever you Journey into the beautiful wood,
If it be for pleasure or your own good
And you gather your bouquet from shrub or from vine
Remember—There are others to follow, so leave something behind.

Do you love to listen to your reel's loud click?
To the drum of the partridge? To the song of the creek?

To see the flag of the deer? To breathe of the air of the pines?
If you wish to meet them again, leave something behind.

Were you ever in the woodland at the true dawn of day?
And heard God's creatures returning thanks in their way?
From the croak of the frog to the thrush's sweet line.
If you love Mother Nature, leave something behind.

When Mother Nature invites you to come her way,
And she gives you enjoyment every moment you stay,
She will furnish you pleasure with rod, gun, and reel.
If you are a true sportsman, you will leave something behind.

—*Bruce Harshbarger*

ANGLING FOR BLACK BASS

(From page 3)

so that they can be adjusted to the different lures used. This facilitates better and more accurate casts as well as eliminates much of the back lash or "birds nest" which result from the spool revolving too fast for the speed the lure is traveling.

Having just acquired a spinning outfit, I can not pass along much advice from experience, but expect to at some future date. However, this method was originated in Europe and was introduced into this country only a few years prior to the war. It was designed primarily for using small spinners, weighted fly and miniature spoons. It can be used for any of the small lures weighing from 1/16 ounce to ⅜ ounce and is an effective way, not omitting the ease in casting lures. It is entirely free of back lashes.

Many anglers are practicing the use of fly rods and small lures such as spoons, miniature plugs, spinner and flies, and the ever growing popular surface lures such as the poppers, and small hair and cork bodied bugs. Using the latter requires skill closely connected with dry fly fishing for trout. That is, for ease in casting, manipulation and pick up, the line should be well greased so that it floats well. When using these lures with a fly rod, the same methods should be used as when using the large variety of lures and a casting rod. Lures designed to imitate living creatures should be manipulated accordingly.

Aside from presenting these lures to the bass by using a bait, fly or spinning rod, the deep running lures, plugs, spoons, spinners and weighted streamer flies; trolling these lures often result in some really fine specimen of bass being taken.

Whichever lure is used, remember while there are hundreds of different varieties of lures, many duplicate each other in action, color, and shape. Select a few lures in the two groups—natural looking and curiosity lures, some in surface, sub-surface and sinking models. It is not necessary to have too wide a selection in order to be successful in taking bass, but present them and manipulate each lure so that they act like something which exists. Follow this rule and your angling for black bass will be successful.



A 'popper' plug. This is a noise maker and is very deadly to black bass.

Here is a point to remember in selecting fish hooks: Trout have fleshy mouths in which a small hook lodges easily and out of which a large hook will tear. Bass have mouths that a small hook will not always penetrate but in which a large hook takes a firm grip.

A Toast

If I were rich I'd build a shrine
In honor of a friend of mine
Who sees me through when others fail,
Though he's so thin, so meek and frail.

When plugs and spinners and the like
All let me down without a strike,
I turn to him and he responds
In rivers, lakes and streams and ponds.

He does his job and does it well,
He sends me home with tales to tell
And fish to show—what if they're small?
That's better than no fish at all!

So drink a toast, long overdue,
To someone who helps me . . . and you:
"May he live long and always squirm.
"All hail our friend, the angleworm!"

—*Arthur Corso*

A long-handled pair of blacksmith's tongs are handy around camp to handle hot pots and skillets, poke the fire, turn meat and fish when frying, drive nails and tent pegs and "peel" catfish.

Eels are bottom feeders. Use a small hook and a heavy sinker to keep the bait on the bottom. The best eel baits are tainted chicken gizzard, bloody beef heart and worms.

STREAM-SIDE LIFE

Jewelweed

By Robert Leo Smith

In spring the stream-side is easily accessible, but in mid-summer it becomes a tangled jungle of vegetation through which you must push and twist to reach the water. Among this rank growth is the spotted touch-me-not or jewelweed, whose purple-spotted, orange flowers are familiar to all stream-side frequenters.

All of the jewelweed's names, both scientific and common, are descriptive of the plant. Impatiens, its genus name, touch-me-not, and snapweed were derived from the sudden exploding of the seed capsule. As the capsule ripens, it becomes more and more turgid until the pressure from the interior becomes so great that the pod splits open, twisting it into several segments and scattering the seeds. The "popping" of the seed pods is especially impressive when you touch a very ripe one; and when you push your way through a thick growth of them, there is a light popping sound all around you.

If you immerse a leaf of touch-me-not into water, you will soon discover how the plant obtained its name jewelweed. For in the water the underside of the leaf acquires a glistening, silvery sheen.

The flower of the touch-me-not, that begins to bloom in August, is distinctive in that one of the sepals is an inflated, cone-shaped sac that ends in a spur. It is especially attractive to the hummingbird who visits it frequently while the flower is in bloom. The stamens of the jewelweed's flower are in such a position that pollen is deposited on the forehead and the base of the bill as the hummingbird probes for nectar. In this way the pollen is transfered from one flower to another.

The jewelweed is of special interest to all outdoorsmen since the juice of this plant is a good remedy for ivy poisoning.



With the Outdoor Writers

Ralph Sides

in the Lancaster New Era

How would you like to pay $2,560 per pound for fish?

Sounds crazy doesn't it? Yet, some very sane but foolish fishermen are paying this rate—for fish they can't even eat, just plain minnows used for bait.

Here's what happens—a fellow stops to dip bait and finds the runs and streams alive with minnows.

He gets excited and just scoops up all he can and dumps them in his bucket.

The law allows him to possess only 35 bait fish (of the minnow family) every one over that amount will cost him $10 in fines.

Just recently one fellow was apprehended with 210 minnows—that's 175 too many and could have amount to $1,750 in fines. Two other fellows had 448 minnows which is 378 overboard or $3,780 down the drain. That's enough money to buy one of the snazziest of speed boats out at The Sports Show.

Actually the maximum fine is never imposed, but it can be steep enough to hurt anyone's pocketbook.

It may seem a severe penalty to those who don't understand the reason for this restriction of taking a limited amount of bait.

However, it is one of the most necessary regulations of conservation. Maryland, for example, didn't bother with these restrictions and its streams were stripped of bait, until recently they came to the realization that they must do something to bring back the natural bait supply. Now they have the same rulings as Pennsylvania.

Careless bait-gatherers often destroy game fish too! Shortly after someone left a stream, it was observed that they had shaken several small fry bass and sunfish from their nets on the bank to die.

This, in itself, is subject to fine of $10 per fish.

Unless we exercise care and consideration of our future bait supply, we are hurting our own sport of fishing.

The rule to remember is that you may possess 35 bait fish or fish bait or a combination of 50. Bait fish are of the minnow family, fish bait consist of hellgrammites, crayfish, waterworms, mussels, etc.

The law stipulates that only one limit may be in one container, and it is frowned upon if two people with fishing licenses possess the limit of bait in one can while together fishing.

Bait placed in anchored fish bait boxes must have two tags with the name and address of the possessor. If there is more than one license holder then a partition is necessary to separate the individual limits of bait.

The taking of bait is a serious problem and only because many thoughtlessly take more than they need as well as more than the law allows, or carelessly shake out their nets and destroy other game and pan fish.

A person may not transport more than his own limit of bait unless accompanied with his companions.

The Outdoorsman

in the York Dispatch

There are more than 2,000 known species of snakes in the world but only four inhabit Pennsylvania in quantity. These are the black snake, the water snake, the copperhead and the rattler. The first three of these are native to York county.

Snakes are covered by scales which act as feet. Their ribs act as legs. There are no ear openings and no eye lids so snakes never close their eyes they are covered by a transparent membrane. Their jaws act independently of each other. Because of this most snakes can swallow their prey whole. The tail is usually about one quarter the body length and may be flat or round. Snakes which live in the water usually have flat tails for swimming.

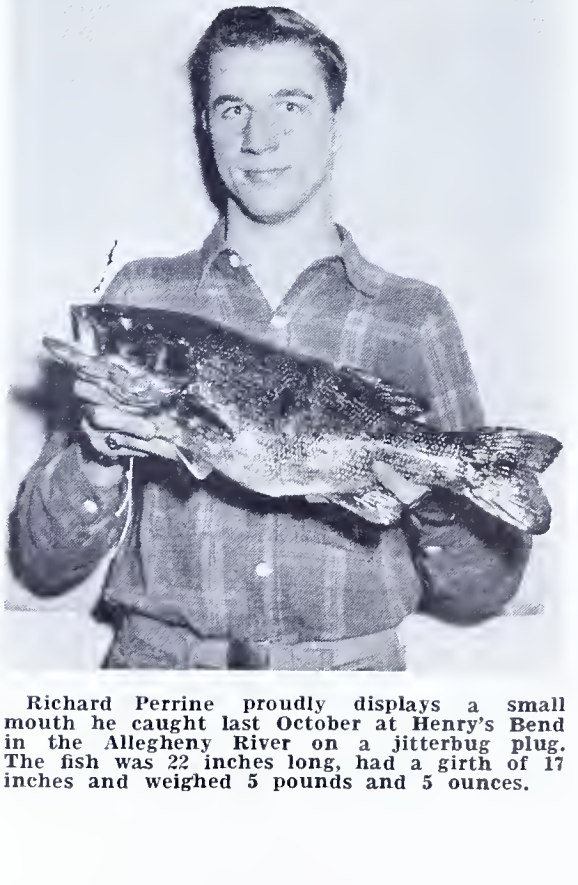
The food is swallowed alive and head first. It consists of insects, fish, other snakes, frogs, birds, bird eggs, rabbits, mice, rats and other small animals.

Their habits vary with the species so it is impossible to generalize about them.

The blacksnake is an egg-laying reptile. The female usually searches for a suitable hollow under a flat stone on a sunny hillside to lay her eggs. The eggs need the heat absorbed by the stone and the moisture in the earth in order to incubate properly.

The mother snake crawls beneath the rock and shoves the earth outward with the folds of her body. She will lay approximately eight to 12 eggs. They are creamy white with a pliable but tough cover about the size of a small bird's egg. After laying the eggs she then crawls away and pays no further attention to them.

Snake eggs grow after being laid by absorbing the moisture from the soft earth.



Richard Perrine proudly displays a small mouth he caught last October at Henry's Bend in the Allegheny River on a jitterbug plug. The fish was 22 inches long, had a girth of 17 inches and weighed 5 pounds and 5 ounces.

In about eight weeks the young snakes cut their way out of the shell by means of a sharp point which nature has provided on the snout of the baby snake. This tooth or sharp point drops off shortly after the hatching period, usually during the latter part of July.

After emerging from the egg, the baby snakes stay close to their nests for a few days. Within a week they are eating insects, such as grasshoppers and crickets. In two months they are approximately 12 inches long.

The color of the young black snake at birth is dark gray with spots. As they become older these spots disappear.

As fall approaches the young snakes seek a deep fissure among the rocks which will be their winter home. The crevice leads down below the frost line for, although the temperature of snakes is usually one degree lower than that of the surrounding air, they cannot withstand temperatures below freezing.

In the spring, about the end of April, the young snake emerges from its winter hibernation during which he loses very little body weight.

The snake lingers close to his home until nights are no longer cold and then wonders forth in search of food. At this time his diet changes from insects and grubs to small rodents and their young. He grows rapidly and as he feeds through the summer months and his size and body weight increases, he may shed his skin as often as three or four times.

The reason for this shedding of the skin is that the skin does not grow. As his size increases to the point where the skin will no longer accommodate his body, the outer epidermis loosens over the entire body even to the covering of the eye. At this time the snake is partially blind, due to the fact that the eye covering has loosened from the eye-ball.

At the time of shedding and partial blindness, the snake readily strikes at any moving object in endeavor to protect itself. Rattle-snakes usually rattle a warning before striking but during this period they may strike without giving warning.

As fall approaches the young snake seeks out a den which is used as a common hibernating place by all the adult of all species within a radius of several miles. This den is invariably situated on the southern slope of a rocky hillside which has fissures running deep into the earth.

Here the snakes congregate in complete harmony. The young snake, by some unexplained method, will always find the den and spend its second winter there. It emerges in the spring and seeks a mate. It will remain in the same locality as long as it lives.

Water-snakes, copperheads and rattlers all bear their babies alive. After birth, the young snakes linger with their mother for approximately a week or so, during which time the mother protects them, but the young are actually able to feed and shift for themselves from the time of birth.

Young copperheads and rattlers are born with fully developed fangs and poison glands, and can inflict a painful bite after the second day. They soon leave their mother to forage for themselves, feeding on insects until they are able to kill and handle larger prey.



Phoenixville Daily Republican photo.

Ralph Brennen, 202 Buchanan St., Phoenixville and his fine 22 in., 6¾ pound large mouth black bass which he caught in the Perkiomen Creek, Montgomery County.

The value of snakes has been largely overlooked. When we realize that the diet of practically all snakes consists largely of injurious insects and rodents, it can readily be understood that they contribute definitely in the control of these pests.

There are occasions when rabbits, birds and other beneficial wildlife are destroyed but this is not the general rule. The exception is the water-snake, whose diet consist's almost entirely of fish and frogs. For this reason he should be killed whenever seen.

The copperhead and rattler will usually crawl away if given a chance and will strike only if cornered or approached too closely. Nature provided them with their poison primarily as a means of obtaining food. They strike not so much for attack as defense.

The belief that a snake never dies before sunset is in error. The sun's position has no bearing on the life of a decapitated snake. The nervous system dies slowly, making it appear that the snake is still alive.

Max Henrici

in the Pittsburgh Sun-Telegraph

Eight states, including Pennsylvania, have entered into a compact to end stream pollution in the Ohio River drainage area. I wonder if there is any hope of restoring fish life as it once was.

Fish were formerly so abundant in the Ohio and its tributaries in Western Pennsylvania that they constituted the chief food of the Indians and the pioneer whites. It is recorded that in the early days of Pittsburgh the apprentices got so "fed up" on their monotonous fish diet that they went on strike and forced the insertion that they were to be fed fish at only a certain number of meals per week—I forgot the number.

Even in the 1890s, when I was a child, the rivers around Pittsburgh were still rich in fish. I remember that when I was six or seven years old the late William Ott (father of Mrs. Ernestine Ott May, hostess at the State Museum at Old Economy) came back from a fishing trip in the Ohio at what is now Ambridge, so loaded down with fish that he scarcely knew how to dispose of them. He gave me a string of fish so heavy that it was all I could do to carry them and told me to take them home to my mother.

I remember being taken out by another man to inspect his night lines, to which perhaps 50 or 60 hooks were attached at intervals of a few feet, and we found numerous fish had been hooked—also huge slimy salamanders of the kind called "hellbenders." Even at that time set lines were against the law, but the law was not very vigorously enforced. At Old Economy fishermen not only used set lines but also speared fish at night by torchlight.

These memories have been called forth by the Pennsylvania Fish Commission's Bulletin No. 7—"A List of the Fishes recorded from Pennsylvania" by Henry W. Fowler, Curator of Fishes in the Academy of Natural Sciences at Philadelphia.

Discussing Mr. Fowler's pamphlet in this column recently, I mentioned that he listed 119 species of fish which had been collected in the Ohio River basin in Western Pennsylvania and I told of a few of them with which I myself had had some experience. I spoke of the brook lamprey, of several species of catfish, of sturgeons, of the paddlefish or spoonbill, of gar pikes, of the inland alewife, a fresh-water herring, and others that I knew of my own knowledge lived in the Ohio valley near Pittsburgh in my childhood.

Today I would like to mention a few others on Mr. Fowler's list. I exclude from consideration such food and game fishes as the black bass, yellow perch and blue gills sunfish, with which everyone is more or less familiar, and confine myself to species that are not so well known.

Mr. Fowler states that the fresh-water sheepshead or drum *(Aplodinotus grunniens),* a fish which sometimes reaches a weight of 50 pounds, has been collected in Indiana County and in the Allegheny and Monogahela Rivers. I never caught one myself in the Ohio but I caught one in Lake Erie at Ashtabula, and Jim Lintz of the *Sun-Telegraph* editorial staff caught one in the lake at Northeast last summer while trolling.

With quite a few of the Western Pennsylvania fishes on Mr. Fowler's list I have had no experience—for example, the white bass *(Lepibema chrysops),* which attains a maximum length of 18 inches; the mooneye *(Hiodon tergisus),* a fish from eight to 12 inches long, and the gizzard shad *(Dorosoma cepedianum),* so called because its stomach looks like a gizzard, but not to be confused with the edible shad of the Susquehanna and Delaware Rivers, which has not been recorded in the Ohio River drainage area. In some localities the gizzard shad, a very small fish, is called "saw-belly."

It occurs to me that it would be very interesting to collect in the small streams of Western Pennsylvania the scores of species of tiny fish. They are called collectively "minnows," but many of them are not true minnows, but differ from minnows biologically as much as a cat differs from a rabbit. An aquarium stocked with many kinds of our tiny native fishes would be worth seeing.

Lyle Simmons

in the Columbia News

There are lots of trout fishermen who are griping about the small number of trout they were able to catch this year. But if they would just stop to figure a little they could see that to expect to catch a large number of trout consistently is out of the question. Let us take the Donegal Run. There were about 700 trout stocked in this stream which is 6 miles long. The first day of the trout season there were probably 350 fishermen scattered along this stream. If they each caught 2 trout that would clean it out. All other streams were crowded the same way, and in all other small streams the fish were all taken out the first few days. If you expect to always come home with trout every time you go trout fishing you better take a few lessons in magic.

Before you leave your camping grounds, bury all garbage, especially fish refuse. Many a good dog has been poisoned on decayed fish.

To remove the odor of cabbage or any cooked food from your cabin, boil some vinegar and water on the stove. The same mixture will remove the smell of onions, fish or scorched food from a skillet.



The young man with the fine rainbow trout is Menno Kurtz of Ephrata. The fish was 24 inches long, no weight given, the catch was made from Hammer Creek near the Lebanon Pumping Station.

Lakes of North-East Pennsylvania

By Joseph A. Yanchik

Laurel Lake

This picturesque body of water is located on the left of the highway which leads to Loughran's and Long Pond. About a quarter of a mile from the road it has a lot of newly created parking space and is a pretty big lake. This lake has a reputation for pickerel although it contains most of the other fresh water species, except bass. The catties and sunfish are small although once in a while a large cat takes the line. Perch look good and some dandies are creeled.

There is a lot of mud in this lake and the fishes colors show it. They look dark in color. Schools of perch are constantly in action and remind you of Fairview Lake. They will take your bait faster than you can dig or buy it. You can see the small sunnies and perch feeding on the bottom in the shallow water. They appear like dark patterns on the bottom and once in a while a shiner darts between them chased by a pickerel. The deepest part of the lake is right off the boat house. As you leave the boat house, you head for the bogs and stumps at the extreme end of the lake. There are small floating islands on this lake, also. Try your fishing near them. The water is quite deep there and some nice beauties of perch and pickerel loitering about. To get a little action whenever it slows down, try a little spinner back of your hook, place a bobber on your line and move it boatward after each cast.

This is mainly a pickerel pond and from July on boats are at a premium. If you don't make reservations for a boat the chances are you won't fish at this pond. I have seen some fine pickerel catches made here when the fish were active. And I have been blanked on other occasions very thoroughly. Live bait can be bought at this lake.

The boats on this lake are kept in perfect condition at all times. They are housed in a large building built over the entrance to the lake. The boats have back rests and you needn't be afraid of wet feet. They are clean and dry at all times. The rental fee is $1.00 per person. Dollar for dollar this pond is tops.

Fairview Lake

Nestled in the arms of a high mountain overlooking Lake Wallenpaupack and on the way to Lenape Village is the beautifully situated Fairview Lake. On any early morning, especially in the fall, the streaming sun through the disappearing fog reveals a jewel, sparklingly blue, surrounded by the technicolor of nature's own chemistry on the stately trees which surround its curvaceous shores. Not a very large lake, Fairview has plenty of spring fed water in its bosom. It is surrounded by Boy Scout and Girl Scout camps mingled among the weeping willows and stately oaks. This lake is in Pike County and one can see deer drinking of its water almost any morning. Deep and dense forests surround this body of water. I fished it four times during the past season. I found the fishing fairly good. This lake abounds with perch which swim about in large schools. Occasionally, a large bass or pickerel will strike your bait then the thrill begins. Sunfish abound here. To really enjoy it, use a fly rod, a light tapered line and leader and the smallest trout flies you possess. Then, prepare for some real, genuine fishing. These sunfish have a beautiful color that looks as if it were just painted on, brilliant and flashing, as the rascals go tearing after the fly. I used a small trout fly and a whole school of them chased it as greedily as a hound chases a rabbit. Once in a while a good sized rock bass will swallow the fly. There must be magic in the yellow color that these fish like so much.

Not many boats are available on this lake for rental. There are plenty of private boats owned by the many cottagers. I rent my boats at Keulin's Inn. The boats are clean and rent for $2.00 per party. The owner of these boats is a candid old gentleman who knows the lake like a story book. When I asked him if the fish were biting he replied: "Of course. Did you ever hear of a fish that could not bite?"

This lake has a muddy and also a rocky bottom. At the left of Keulin's Landing the lake is very shallow and is filled with lily pads under which lurk the pickerel and bass together with the perch. Here the bottom is very muddy and your anchor digs deep into the slime. You cannot fish too deeply here and a cork will have you a lot of snags. The perch, here, are ravenous and you'll catch five to one of any other species in the lake. To the right of Keulin's Inn lay the ledges, large formations of submerged rocks which slant into the deepest water in the lake. Here, the bass are very active, particularly, rock bass. Still, you may expect a lot of perch action, even here. The bottom is rocky and you can expect to lose a lot of hooks in this part of the lake. To the right of the ledge near the outlet where the bridge spans the culvert is a pretty deep hole where the bottom is muddy also. There, according to the natives, the largest fish lie in wait for the minnows dangling off the barbed hooks. I didn't get a bite there.

Many logs are afloat near the shore and plug casting becomes a problem. When I fished the middle of the lake the perch were just as plentiful. If and when these perch grow to the size of some which I have hooked at Wallenpaupack, then Fairview Lake will be a fisherman's paradise.

Yet, this lake, with its scenic beauty and its primitive setting is worth a day of any angler's time. Catfish are caught here, also, and they are delicious. One night, however, they were not biting at all, but I enjoyed it anyhow. Across from where I was anchored a sound picture was being shown to some boy scouts who were seated on the lawn under the trees. I enjoyed the movie under the willows whose branches were gently caressing the still water. And what do you think the movie was about? You guessed it. It showed big bass hitting plugs in the marshes and being netted into a happy fisherman's boat. Well, it was about fishing, anyway.

I like this lake. It is clear and the people who live there are good sports. Give it a try sometime.

Stillwater Dam

The history which brought about the naming of this dam "Stillwater" is an enigma to me. One day, a party of three of us were caught in the logs and stumps above the old ice house sites, by a teriffic pounding of white capped waves. Never, with the exception of Wallenpaupack, has any lake given us such anxious moments.

Northeasters create havoc on this lake and when this type of wind storm comes along and begins to spank the side of your boat then it is time to heave ho, shoreward. This lake then becomes a Noisywater Dam in a few moments. Yet, in the summer, there are calm and hot summer days when the lake is really still and when the only disturbance is caused by a struggling insect, a swooping hawk, a swallow, or the fin of some lazy fish basking in the warm sunlight.

Located about 35 miles from Wilkes-Barre, Pa. and not far from the Pocono Pines, this lake is a mecca for thousands of fishermen from Scranton and surrounding towns. The bottom of this lake is very rocky, particularly on the left of the boat site. The deepest water is right off the boat landing and near the tumbledown ice houses. On the right of the boat house the water is filled with green-scum and floating logs and submerged stumps. Strings of small leafed, vine like plants cover the water making trolling a very snaggy experience. Above the ice houses the water is filled with floating stumps, logs, planks and branches of dead trees. Hundreds of tall, grey trees, which look almost petrified, protrude through the water and stand like ghostly sentinels amidst the water's pale blueness. Such a prevailing condition should create favorable feeding grounds for catties, pickerel and bass. Indeed, this lake holds lots of big fish in its spring fed belly.

Fishing among the stumps and trees at the far recesses of the lake, one could easily mistake it for a no man's land. It is wild and wooly in this section of the lake but it is very fascinating to watch your cork bob up and down and then disappear under the water near a moss covered stump. At the extreme end of the right of the lake's boat site is the best catty fishing. The water is quite deep here in spite of the logs and dead trees. Fishing in this part of the lake is a sacrifice of many lines and hooks. Snags on tree limbs, logs and roots of stumps is inevitable but somewhere below the surface a big fish makes you forget such inconveniences.

The boating facilities on this lake are adequate. The charge is a dollar per person. The boats are in fairly good condition but of shallow draft. Here is a good fishing lake and when they are biting, the sport becomes a happy angler's paradise. However, the last visit we made to Stillwater was not very productive, piscatorially. We might have stayed in bed. The fish were suffering from a common ailment; lock-jaw.

Pennsylvania Fish Law Violations

Cases Settled During the Month of June 1949

Adams County

Howe, Donald J., R. D. 4, Gettysburg, Pa. Fishing without a license $25.00
Sowers, Clarion, R. D. 2, East Berlin, Pa. Fishing without a license 25.00
Stambaugh, Evelyn, R. D. 1, New Oxford, Pa. Fishing without a license 25.00
Yingling, Daniel, R. D. 2, Gettysburg, Pa. Using illegal devices 20.00

Allegheny County

Armheim, Robert J., 2638 Elsie St., Pittsburgh, Pa. Possessing bull frog in closed season 10.00
Balcer, Walter, 2125 Carson St., Pittsburgh, Pa. Fishing without a license 25.00
Laninski, Kenneth, 4228 Sherrod Ave., Pittsburgh, Pa. Fishing in nursery waters and having one black bass out of season 30.00
Markiewiez, Stanley, 454 Library St., Pittsburgh, Pa. Fishing in nursery waters 20.00
Negley, Wayne W., 235 Wood St., Tarentum, Pa. One bass in closed season 10.00
Porter, William E., 2433 Upfold St., Pittsburgh, Pa. Exceeding creel limit 20.00
Schlintz, Elmer, Finleyville, Pa. Two undersized trout 20.00
Schwarz, John, Mt. Oliver, Pittsburgh, Pa. One game fish over limit 10.00
Snyder, Frances, 400 Hancock St., Pittsburgh, Pa. Fishing in nursery waters 20.00
Sullivan, Arthur, 927 Grant Ave., Millcreek Township, Pa. Fishing in nursery waters 20.00

Beaver County

Kepple, John A., 1643 Henrica St., Ambridge, Pa. Violating rules and regulations on Slate Run and one undersized trout 20.00

Bedford County

Clark, Elliott C., R. F. D. 2, Everett, Pa. Using illegal devices 20.00
McFarland, John Jr., R. F. D. 2, Everett, Pa. Using illegal devices 20.00
Taylor, John H., R. F. D. 2, Everett, Pa. Fishing without a license 25.00
Young, Tucker L., 321 N. Spring St., Everett, Pa. Fishing without a license 25.00

Berks County

Davis, Charles W., 915 Walnut St., Reading, Pa. Exceeding bait fish limit 10.00
Davis, Gerald, 915 Walnut St., Reading, Pa. Exceeding bait fish limit .. 10.00
Leidenspreger, George, 1503 New Holland Rd., Reading, Pa. Catching a frog on Sunday 20.00
Leigenspreger, George, 1503 New Holland Rd., Reading, Pa. One frog out of season 10.00

Blair County

Baker, James P., 717 9th St., Altoona, Pa. Rod not under immediate control 20.00
Barkley, G. M., 403 7th Ave., Juniata, Pa. Fishing in closed stream 25.00
Burd, Stanley R., 527 Main St., Bellwood, Pa. One pickerel in closed season 10.00
Gagermeier, Wayne, 2108 5th Ave., Altoona, Pa. Fishing without permission on Sunday 25.00
Goodman, Frank E., Jr., 318 Cherry Ave., Altoona, Pa. One frog in closed season 10.00
Isenberg, Richard, 416 W. 16th St., Tyrone, Pa. Fishing in closed streams 25.00
Maines, Wallace, 2028 Crawford Ave., Altoona, Pa. Sunday fishing without permission 25.00
Rutter, Wilber J., 1803 9th Ave., Altoona, Pa. Not displaying license plates on motor boat 5.00

Bradford County

Bland, George V., 222 Ann St., Athens, Pa. Thirty brook trout over limit .. 300.00

Bucks County

Salvaggio, Sam, 719 Anderson Ave., Bristol, Pa. Fishing without a license 25.00

Butler County

Johnston, Hugh F., R. F. D. No. 5, Butler, Pa. Twenty minnows over limit 200.00

Cambria County

Anderson, Robert J., 130 Berkley Rd., Johnstown, Pa. Using illegal devices 20.00
Berthon, Louis, Dunlo, Pa. Fishing in a closed stream 25.00
Bodner, Andrew, Emeigh, Pa. Exceeding bait fish limit 10.00



Charles Custshaw of Tionesta and two muskies he caught from Tionesta Dam last July 1. No weight was given but the fish measured 41½ and 34 inches in length.

Derrick, Lemoine, 915 Caldwell Ave., Portage, Pa. Violation of the rules and regulations of the Pa. Fish Commission 20.00
Dillen, Walter, Utahville, Pa. Fishing in a closed stream 25.00
Findley, Frank M., 403½ Chestnut St., Johnstown, Pa. Using illegal devices 20.00
Gates, Harold R., R. D. No. 5, Box 94, Johnstown, Pa. One illegal trout .. 10.00
Lehman, Henry I., 113 Kring St., Johnstown, Pa. One black bass in closed season 10.00
Movinsky, Anthony P., R. D., Barnesboro, Pa. Fishing in Hazlett Run, had no fishing license 25.00
Movinsky, Anthony P., R. D., Barnesboro, Pa. Killed two trout with stones 20.00
Morris, Mike, Fallen Timber, Pa. Unnautralized foreigner fishing 20.00
Puskas, Paul, Box 246, Twin Rocks, Pa. Exceeding creel limit 10.00

Centre County

Caldwell, Rex E., 304 E. Logan St., Bellefonte, Pa. One undersized trout 10.00
Davy, Robert, Blanchard, Pa. Violations of the rules and regulations of the Pa. Fish Commission 20.00
Fravel, Wesley, 2nd St., Box 351, Philipsburg, Pa. Violation of the rules and regulations of the Pa. Fish Commission on Young Woman's Creek 20.00
Johnston, Joseph, 605 Spruce St., Philipsburg, Pa. Using illegal devices in the restricted area of Y. W. Creek 20.00
Mandel, Raymond, 350 R. D., Philipsburg, Pa. One undersized trout 10.00

Chester County

Smith, Richard G., R. F. D. No. 1, Downingtown, Pa. Fishing without a license 25.00

Clarion County

McCauley, James H., Fryburg, Pa. Exceeding creel limit 10.00

Clearfield County

Albert, Roy, Wallaceton, Pa. Wading in restricted waters of Spring Creek 20.00
Culich, Gerald, 608 Turnpike Ave., Clearfield, Pa. Fishing in a posted stream 25.00
Dininey, Russell, Winburne, Pa. One undersized trout 10.00
Hawkens, Richard E., Box 254, Madera, Pa. One undersized trout .. 10.00
Heichel, Gordon, 711 Textile Ave., Clearfield, Pa. Fishing in a posted stream 25.00
Heichel, Wilford, Sandy Ridge, Pa. Fishing in a posted stream 25.00
Kubel, Howard, 619 Barclay St., Clearfield, Pa. Fishing in a posted stream 25.00
Kniss, Francis R., Madera, Pa. Violation of the rules and regulations of the Pennsylvania Fish Commission, Y. W. Creek 20.00

Clinton County

Bennett, William D., North Bend, Pa. One undersized trout 10.00
Bennett, William D., North Bend, Pa. Violation of the rules and regulations of the Pa. Fish Commission .. 20.00



The angler is Richard H. Lentz, age 7 years, who resides at Lima, Pennsylvania. The fish was caught March 30, 1949 on a night crawler, in the Springton reservoir of the Philadelphia Suburban Water Supply Co., near Newton Square, Del. Co., Penna., was a blue gill, 11½ in. in length, weighed 1 pound, 5 ounces, was 2 inches thick, and girth was 11 3/16 inches.

Bennett, William D., North Bend, Pa. Four undersized trout 40.00
Clymer, Millard, 148 N. Fairview St., Lock Haven, Pa. Violation of the rules and regulations applying to Slate Run 50.00
Eggler, John M., 312 W. Walnut St., Lock Haven, Pa. Two undersized trout on Slate Run 40.00
Fisher, Byron A., 5 Brown St., Lock Haven, Pa. Fishing in a posted stream 25.00
Glossmer, William, 338 S. High St., Lock Haven, Pa. Fishing in a posted stream 25.00
Marsh, Bernard W., Renovo, Pa. Killing 11 trout in one day 10.00
Neff, Robert, 308 Jay St., Lock Haven, Pa. Fishing in a posted stream .. 25.00
Robinson, Cordis M., 141 14th St., Renovo, Pa. Violation of the rules and regulations of the Pa. Fish Commission 20.00

Columbia County

Shuman, John A., Bloomsburg, Pa. Fishing without a license 25.00
Gingles, Henry H., Jerseytown, Pa. Illegal devices 20.00
Llewellyn, Gertrude, Bloomsburg, Pa. One Susquehanna Salmon in closed season 10.00

Crawford County

Loomis, Raymond F., R. F. D., Cambridge Springs, Pa. Fishing without a license 25.00

Cumberland County

Conrad, Marvin, R. D., Carlisle, Pa. Using illegal device 20.00
Huntsberger, Charles A., Shepherdstown, Pa. Fishing without a license 25.00
Reigel, Charles, 134 Hummel Ave., Lemoyne, Pa. Fishing in a posted stream 25.00
Tukosky, Pete, 711 3rd St., New Cumberland, Pa. Fishing in a posted stream 25.00

Dauphin County

Griffey, Jackson, 625 Boas St., Harrisburg, Pa. Fishing in a posted stream 25.00
Murry, Byron O., 1315 Walnut St., Harrisburg, Pa. One bass in closed season 10.00

Delaware County

Danforth, William E., 614 Hillborn St., Swarthmore, Pa. One undersized trout 10.00
Miller, William S., 124 E. State St., Media, Pa. Exceeding creel limit .. 10.00
Starr, Grace, 307 E. 22nd St., Chester, Pa. Fishing without a license 25.00
Zilesnick, Frank P., 248½ E. 2rd St., Chester, Pa. Failure to display fishing license 25.00

Elk County

Burek, Joseph, 872 Brussells St., St. Marys, Pa. Four undersized trout 40.00
Finfinder, George E., 293 Charles St., St. Marys, Pa. One undersized trout 10.00
Hanes, Linus, Wehler Ave., St. Marys, Pa. Two undersized trout 20.00
Meyer, Robert, Weedville, Pa. Two undersized trout 20.00
Minnick, Francis, 872 Brussells St., St. Marys, Pa. One undersized trout .. 10.00
Straub, Frank E., 306 John St., St. Marys, Pa. One undersized trout .. 10.00

Erie County

Beardsley, Eldridge J., R. F. D. 1, Corry, Pa. Fishing without a license 25.00
Borchick, Stephen, 2024 Fairmont Ave., Erie, Pa. Fishing in nursery waters 20.00
Coiteux, Louis P., 801 French St., Erie, Pa. Fishing without a license 25.00
Jewell, Frank E., 722 West 12th St., Erie, Pa. Fishing in nursery waters 20.00
Jewell, James E., 722 West 12th St., Erie, Pa. Fishing in nursery waters 20.00
Mancuso, Sam., 962 West 16 St., Erie, Pa. Fishing without a license 25.00
Novek, Edward, 747 East 34th St., Erie, Pa. Fishing in nursery waters 20.00

Fayette County

Kelley, Howard N., Star Route, Uniontown, Pa. Undersized trout in Slate Run 20.00
Schubert, Louis, Republic, Pa. Exceeding bait fish limit 10.00

Fulton County

Keebaugh, Virgil, Needmore, Pa. Using illegal devices 20.00

Huntingdon County

Edgin, Robert J., R. D., Mt. Union, Pa. Two pickerel in closed season 20.00
Heffner, Fred H., R. D. 1, Huntingdon, Pa. One walleyed pike in closed season 10.00
Hoffman, Delwin F., Saltillo, Pa. Exceeding creel limit 10.00
Horn Samuel D., 17 Birch St., Mt. Union, Pa. Two undersized trout .. 20.00
Pearce, John L., R. D. 1, Huntingdon, Pa. Using illegal devices 20.00

Indiana County

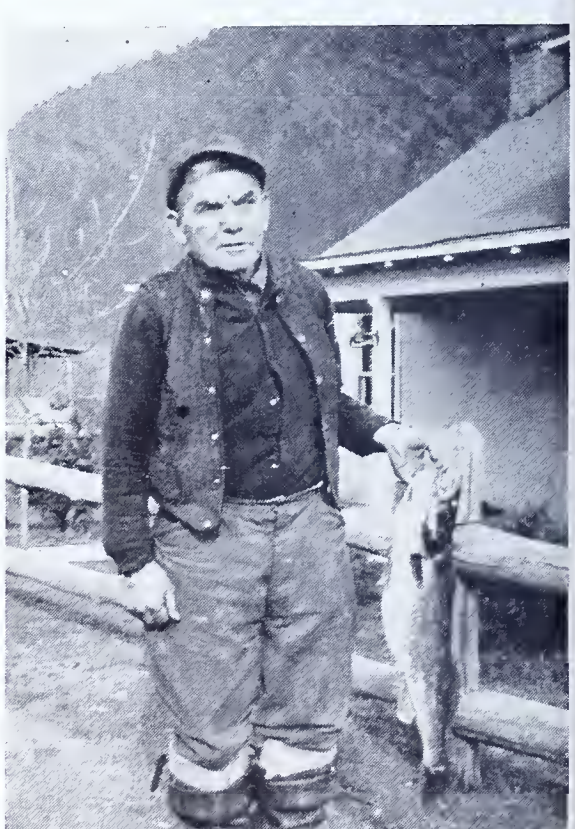
Chidbey, Leonard, R. D. No. 1, Glen Campbell, Pa. Using illegal devices 20.00
Leib, Jacob D., 524 Chestnut St., Indiana, Pa. Using illegal devices .. 20.00
Leib, Jacob D., 524 Chestnut St., Indiana, Pa. One undersized trout .. 10.00
Lentz, Charles J., Glencampbell, Pa. Rod not under immediate control .. 20.00

Jefferson County

Haverley, William W., Brockway, Pa. Fishing in nursery waters 100.00
Haverley, William W., Brockway, Pa. Using illegal devices 20.00
Haverley, William W., Brockway, Pa. One trout in possession during closed season 10.00
Kahle, Lon, R. D. No. 1, Sigel, Pa. Fishing without a license 25.00
Lydic, Otto, R. D. No. 5, Punxsutawney, Pa. Using illegal devices .. 20.00
Sabatose, Frank, 1756 Bond St., Brockway, Pa. Using illegal devices 20.00
Sabatose, Frank, 1756 Bond St., Brockway, Pa. One trout during closed season 10.00
Sabatose, Frank, 1756 Bond St., Brockway, Pa. Fishing in nursery waters 100.00

Juniata County

Kehler, John M., Port Royal, Pa. Nine trout over limit 90.00
Kehler, John M., Port Royal, Pa. Six trout over limit 60.00
Zeiders, John W., R. D. No. 1, Mifflintown, Pa. One trout over limit 10.00



Edgar J. Stouffer, of Huntingdon, and a walleye he caught during the '48 season. This fish was 29½ inches long and weighed 9¼ pounds. Mr. Stouffer also reports catching a cat fish 27 inches long that weighed 8 pounds.



Meadville Tribune Photo.
Alex Timco, of 1221 Elm St., Meadville, displays his 39 inch, 15 pound musky he took from Cussewago Creek last season.

Lackawanna County

Genovese, Neil J., 12 Hospital St., Carbondale, Pa. Operating motor boat without license plates 5.00
Kolosinsky, John, 323 Lynch St., Olyphant, Pa. Violation of the rules and regulations on Slate Run 20.00
Laskowski, Adam, 3348 Greenwood Ave., Scranton, Pa. One pickerel in closed season 10.00
Yanavitch, John, 1622 Return Ave., Scranton, Pa. One pickerel in closed season 10.00
Yanavitch, John, 1622 Return Ave., Scranton, Pa. Fishing without a license 25.00

Lancaster County

Dyer, Eugene, 515 Locust St., Denver, Pa. Operating a motor boat without a license 20.00
Herly, Monroe, R. D. No. 1, Ephrata, Pa. Operating a motor boat without displaying license plates 10.00
Nagle, Paul, 206 W. Front St., Marietta, Pa. Using illegal devices 20.00
Nagle, Paul, 206 W. Front St., Marietta, Pa. Fishing without a license 25.00
Nagle, Paul, 206 W. Front St., Marietta, Pa. Exceeding bait fish limit 50.00
Spriggs, John, 226 Perry St., Columbia, Pa. Exceeding bait fish limit .. 10.00

Lebanon County

Wentzler, Andrew J., 501 E. Cumberland St., Lebanon, Pa. Operating a motor boat without displaying license plates 5.00

Luzerne County

Howe, James, Jr., Fox Hill, R. D., Wilkes-Barre, Pa. Exceeding creel limit 20.00
Howe, James, Jr., Fox Hill, R. D., Wilkes-Barre, Pa. Sunday fishing without permission 25.00
Lamoreaux, Louis, 102 Bidlack St., Forty Fort, Pa. One tadpole in closed season 10.00
Samson, Edward, 70 Spring St., Wilkes-Barre, Pa. Sunday fishing without permission 25.00
Walton, Theodore, 16 Slocum St., Forty Fort, Pa. One tadpole in closed season 10.00

Lycoming County

Baker, Harold L., 37 W. Houston Ave., Montgomery, Pa. Operating a motor boat without a license 10.00
Bastian, Robert S., R. D. No. 3, Muncy, Pa. Operating a motor boat without a license 10.00
Bennett, Max F., R. D. No. 1, Montgomery, Pa. Using illegal devices 20.00
Gohl, Melvin R., R. D., Salladasburg, Pa. Fishing without a license 25.00
Haverstine, Paul J., R. D. No. 2, Williamsport, Pa. Shooting frogs in closed season 10.00
Heard, David F., R. D. No. 2, Williamsport, Pa. Shooting frogs in closed season 10.00
Merrick, Elmer D., 464 Elmira St., Williamsport, Pa. Operating motor boat without displaying license plates 10.00
Skeeby, Carl L., 1715 E. 3rd St., Williamsport, Pa. Operating motor boat without displaying license plates .. 5.00

McKean County

Brigger, Leonard L., Box 32, Rixford, Pa. One undersized trout 10.00
Colegrove, Wesley, Port Allegany, Pa. One undersized trout 10.00
McCoy, Edna D., Smethport, Pa. One undersized trout 10.00
Farrell, George R., R. D. No. 3, Bradford, Pa. Exceeding creel limit 10.00
Turner, Darwin, R. D. 2, Eldred, Pa. One undersized trout 10.00

Mifflin County

Hesser, Melvin L., R. D., Mattawana, Pa. Exceeding creel limit 60.00
Hesser, Melvin L., R. D., Mattawana, Pa. Eight undersized trout 80.00
Karpster, James A., 708 Freedom Ave., Burnham, Pa. Three undersized trout 30.00

Montgomery County

Bartholomew, Eugene, 323 Roland St., Pottstown, Pa. Exceeding creel limit 30.00
Johnson, Eugene, Roberts Alley, Norristown, Pa. One illegal frog 10.00
Yucalevich, Leonard, North Lane & Hector St., Conshohocken, One illegal frog 10.00

Northumberland County

Hendricks, Gladys, 26 E. Sunbury St., Shamokin, Pa. Fishing without a license 25.00
Straub, Raymond E., 649 Diamond St., Shamokin, Pa. Using illegal devices 20.00

Perry County

Sands, Jacob, G., 50 Valley St., Duncannon, Pa. One bass in closed season 10.00

Philadelphia County

Barley, Benjamin, 1235 S. Napa St., Philadelphia, Pa. Fishing without a license 25.00
Barnes, William L., 2214 Fitzwater St., Philadelphia, Pa. Fishing without a license 25.00
Bennett, Harry, N. 22nd St., Philadelphia, Pa. Using illegal devices .. 20.00
Bibbs, Lewis, 1611 N. 17th St., Philadelphia, Pa. Fishing without a license 25.00
Bouliford, Robert, 4723 N. 10th St., Philadelphia, Pa. One fish in closed season 10.00
Carr, Joseph, 737 S. 15th St., Philadelphia, Pa. Fishing without a license 25.00
Bundy, Russell, G., 133 N. 50th St., Philadelphia, Pa. Fishing without a license 25.00
Hill, Maynard B., 4443 S. 87th St., Philadelphia, Pa. Fishing without a license 25.00
Jackson, George W., 5913 Charles St., Philadelphia, Pa. Fishing without a license 25.00
Kwiecien, John P., 827 S. 3rd St., Philadelphia, Pa. Fishing without a license 25.00



Another trout lost to the hook and line. A 10 inch brown trout which would have shortly disappeared inside the 3 foot water snake had it not been killed by Sam Danzberger of Chambersburg. Many more fish than can be imagined meet this fate each year.

McCullough, Fred, 1902 N. 13th St., Philadelphia, Pa. Fishing without a license 25.00
McField, J. T., 1950 N. 18th St., Philadelphia, Pa. Fishing without a license 25.00
Overton, James, 4034 Creston St., Philadelphia, Pa. Fishing without a license 25.00
Owens, Charles H., 8609 Ashwood Ave., Philadelphia, Pa. Fishing without a license 25.00
Smallwood, William, 745 S. 15th St., Philadelphia, Pa. Fishing without a a license 25.00
Soli, Frank J., 815 Cantrell St., Philadelphia, Pa. Fishing without a license 25.00
Wiggins, Thomas, 828 Preston St., Philadelphia, Pa. One fish in closed season 10.00
Williams, Yancie, 1331 S. Napa St., Philadelphia, Pa. Fishing without a license 25.00

Potter County

Lowe, Laverne, Shinglehouse, Pa. Three undersized trout 30.00

Schuylkill County

Faust, Paul I., Pine Grove, Pa. Fishing without a license 25.00
Herwig, Andrew, 1347 W. Market St., Pottsville, Pa. Fishing in a posted stream 25.00
Katchur, Michael Sr., 6 South Morris St., Clair, Pa. Fishing in a posted stream 25.00
Koons, John, Hegins, Pa. Fishing in a posted stream 25.00
Kurtz, Joe, 825 W. Market St., Pottsville, Pa. Fishing in a posted stream 25.00
Kutchinsky, William, 341 W. Mahanoy Ave., Girardville, Pa. Using illegal devices 20.00
Malick, Wayne, Valley View, Pa. Fishing in a posted stream 25.00
Mehlman, Harry, 305 N. 2nd St., Pottsville, Pa. Fishing in a stream before the opening hour of 12 noon 25.00
Paslowsky, William, 222 W. Ridge St., Coaldale, Pa. Fishing in a posted stream 25.00
Perez, Frank, 228 S. W. Shenandoah, Pa. Exceeding catfish creel limit .. 10.00
Rogowicz, Chester, Jr., 1766 E. End Ave., Pottsville, Pa. Fishing in a posted stream 25.00

Snyder County

Heddens, Lewis, 108 S. 3rd St., Selinsgrove, Pa. Operating a motor boat without displaying license plates .. 10.00
Reimard, Richard C., Port Treverton, Pa. Operating a motor boat without a license 10.00

Somerset County

Ansell, John T., R. D. No. 6, Somerset, Pa. Fishing without a license 25.00
Dill, Joseph A., Holsopple, Pa. One bass in closed season 10.00
Eisler, Conrad, S. Center Ave., Somerset, Pa. Using illegal devices 20.00
Firl, Carl E., R. D. No. 1, Meyersdale, Pa. One undersized trout 10.00
Gohn, Robert W., R. D. No. 1, Stoystown, Pa. Operating a motor boat without a license 10.00
Horner, Mrs. Owen, Boswell, Pa. Violation of the rules and regulations of Pa. Fish Commission on Youngwomans Creek 20.00
Pritts, Alva, Rockwood, Pa. Fishing in a posted stream 25.00
Rascona, Sam J., 113 E. Main St., Somerset, Pa. Exceeding bait fish limit 10.00
Singo, Ernest E., R. D. No. 5, Somerset, Pa. Ten undersized brook trout 100.00
Singo, Clifford E., R. D. No. 5, Somerset, Pa. Five undersized brook trout 50.00

Susquehanna County

DelPlain, Clifford D., Brackney, Pa. Operating a motor boat without a license 10.00



Raymond Suzenski, 15 years old, who lives at 212 Heckle St., Phoenixville. Raymond holds in his right hand a 22½ in. large mouth black bass while in his left he displays a 5½ pounder.

Tioga County

Goodrich, E. P., 70 E. Elmira St., Mansfield, Pa. One illegal trout .. 10.00
Nesbitt, Llewellyn H., Ogdensburg, Pa. Exceeding creel limit 10.00
Purvis, Fay O., Tioga, Pa. One undersized trout 10.00
Williams, Clinton T., 68 Main St., Wellsboro, Pa. One undersized trout 10.00

Venango County

Beatty, DeWayne, Cooperstown, Pa. Using illegal devices 20.00

Washington County

Horwoth, Louis, West Brownsville, Pa. Exceeding bait fish limit 10.00
Hatolasky, Charles, West Brownsville, Pa. Exceeding bait fish limit 10.00
Molchan, Joe., West Brownsville, Pa. Exceeding bait fish limit 10.00
Vanvoorhis, Isaac, R., Beallsville, Pa. Using illegal devices 20.00

Westmoreland County

Brinker, Edward S., 9 N. Mount St., Greensburg, Pa. Two undersized trout 20.00
Civitarese, Americo, Derry, Pa. One bass in closed season 10.00
Cribbs, John A., 810 Ridge Ave., Jeannette, Pa. Three undersized brook trout 30.00
Hamill, Dr. J. H., 211 Main St., Latrobe, Pa. One undersized trout .. 10.00

Wyoming County

Calvert, Grace, R. F. D. No. 3, Tunkhannock, Pa. Exceeding creel limit 50.00

York County

Cheresco, Bernard, New Cumberland Depot, Pa. Fishing in a posted stream 25.00
Fake, Wayne, 225 N. Main St., Red Lion, Pa. Fishing in a posted stream 25.00
Cross, G. I., 912 Sherwood St., Hanover, Pa. Failing to display license plates on a motor boat 5.00
Holtzapple, Harry, 787 E. Philadelphia St., York, Pa. Fishing in a posted stream 25.00
Jacoby, Donald, 221 W. Maple St., York, Pa. Fishing without a license 25.00
Jacoby, John, 221 W. Maple St., York, Pa. Fishing without a license 25.00
Oerman, Roland, 209 Green St., York, Pa. Using illegal devices 20.00
Petersheim, Joseph, R. D. No. 2, Elverson, Pa. Violation of the rules and regulations of the Pa. Fish Commission 20.00
Williams, William, 948 E. Poplar St., York, Pa. Exceeding creel limit .. 20.00

Out of State

Collins, Leroy A., Seaford, Delaware. Fishing without a license .. 25.00
Hendrix, George A., 2032 Belmont St., Chicago, Ill. Fishing without a license 25.00
Fowler, Earskine J., Clay St., Annapolis, Md. Fishing without a license 25.00
Becker, Richard F., Sedalia, Mo. Two undersized trout 20.00
Maurer, Ray W., 206 N. Day St., Orange, N. J. Fishing without a license 25.00
Ciotoli, Vincent, 314 O'Dell Ave., Endicott, N. Y. Operating a motor boat without a license 5.00
Evingham, Mark E., R. D. No. 1, Wellsville, N. Y. Fishing without a license 25.00
Hurtt, John, 75 Ethel St., Johnson City, N. Y. Operating a motor boat without a license 10.00
Twordeskie, Egnots, 132-08 Hanlin Ave., Elmira Heights, N. Y. Fishing without a license 25.00
Lynch, John D., Sanford, N. Carolina. Fishing without a license 25.00

A red salmon, marked by the U. S. Bureau of Fisheries in Alaskan waters in May, and caught 44 days later in a Siberian stream, was found to have traveled 1,300 miles in that time.

Forest and wood fires annually destroy enough timber to make 5,700,000 tons of newsprint.

PENNSYLVANIA'S

ANTI-POLLUTION PROGRESS

Bureau of Engineering Makes Report on Survey

Report of a survey of stream pollution in the Delaware River Basin has been made by the Bureau of Engineering, State Department of Health, which is executing the Clean Streams drive, to the Sanitary Water Board, giving the industrial wastes status of 431 industries and the sewerage status of 92 municipalities, institutions and industries. The report does not include the pollution situation in the Schuylkill River Basin which was reported to the Board a few weeks ago.

Of the 431 industries surveyed for industrial wastes, it is reported that 126 either have no wastes, or are abating pollution by various methods, including discharge to municipal sewers. Orders to abate pollution or to submit plans for treatment works have been sent by the Board to 88 industries and 14 of the concerns surveyed have submitted plans for treatment works to the Board for approval. Of the total industries, 46 have permits, issued by the Board for waste treatment systems. Of that number 33 concerns have constructed treatment systems or have instituted abatement methods; nine concerns are now constructing treatment works, and three concerns are under orders to have treatment works in operation on or before specified dates. Included in the survey are 156 concerns where further investigation must be made to establish their definite status.

It is pointed out in the report that in addition to the listed industries there are probably 600 other establishments in the area, all of small size, which must yet be investigated, but it is stated that many of them discharge to municipal sewers or use cesspools of subsurface disposal and do not discharge wastes to the streams.

Covering the status of sewerage the report states that 60 municipalities, institutions and industries have sewage treatment works and orders have been issued by the Board to 28 municipalities and to four institutions and industries requiring them to prepare plans for sewage treatment works.

The counties in the Delaware River drainage area are Luzerne, Monroe, Pike, Wayne, Carbon, Lehigh, Northampton, Bucks, Chester, Delaware, Montgomery and Philadelphia. It is pointed out that in the counties of Bucks, Chester, Delaware, Montgomery and Philadelphia alone, the streams and rivers are sources of raw water supply for 29 filtration plants serving approximately 2,500,000 people.

Dr. Vaux Declares Pollution Clean-Up Will Conserve Water

"It is of vital importance that more serious consideration be given generally, and particularly by industry, to underground water supplies in this State, which in some areas are showing definite decline," Dr. Norris W. Vaux, Health Secretary and Sanitary Water Board Chairman, declared while pointing to the Clean Streams program as one for the conservation of water through preservation of its quality.

"Expanding industrial operations and population growth necessarily bring greater demands for water. Because of the heavily polluted condition of many of the streams, caused both by municipalities and industry, more and more dependence is being placed upon underground sources to supply those demands. In some sections of the State it has already been necessary to augment existing wells with new ones in other locations because the wells in use are no longer able to provide the increased requirements. This condition can become widespread and therefore serious, both for industry and for public water supplies."

"The continued development of high speed machinery and air conditioning is bring an ever increasing demand for underground water since it is of even temperature. To assure that depletion of supplies for those purposes and for use in areas where stream water is not available, will not reach the danger mark, it becomes a matter of vital importance that water from the streams be used to the fullest extent. This can be done when pollution is abated which is the responsibility of those who are contaminating the streams. Under the Clean Streams program of the Sanitary Water Board pollution abatement will become a reality but that time can be well advanced by full-fledged cooperation from all sources. In giving that cooperation industry and the public will be acting only to serve their own best interests and for the advancement of the public welfare."

"One needs only to be reminded of the condition in the Southwestern section of the country, where within the past five years the water tableland has dropped as much as 75 feet, is becoming progressively worse and causing much concern, to realize the necessity for conservation."

Hospital Plant Put in Operation

A new sewage treatment works has been placed in operation at Embreeville State Hospital, Chester Co., abating pollution of West Branch of the Brandywine Creek by that institution, complying with requirements of the Sanitary Water Board under the Clean Streams program. The new plant is designed to serve approximately 1,200 persons and replaces an antiquated works which was not only inefficient, but which was not of sufficient capacity to serve the increase in population which will follow the completion of new hospital buildings which will soon be put under construction.

Cases Referred to Justice Dept.

Two cases involving failure to comply with requirements of the Sanitary Water Board in promotion of the Clean Streams drive, have been referred to the Department of Justice by the Board. One of the concerns is the Durham Paper Board Co., Bucks Co., located along Cook's Creek, a tributary of the Delaware River. It is claimed the company has failed to abate pollution of the waterways in accordance with the Board's orders. The other concern is the Mushroom Products, Inc., Chester Co., located along Red Clay Creek, tributary of the Delaware River. The company was ordered to send a representative to appear before the Board to explain the pollution situation at its operation. A representative failed to appear.

Valley Manufacturing Company Installs Neutralizing Plant

A neutralizing plant for the treatment of spent pickle liquor, produced in the course of manufacturing steel, has been installed at the New Castle rolling mill of the Valley Manufacturing Co., a subsidiary of the Hudson Motor Co., to abate pollution of the stream as is required under the Clean Streams program. Included in the finishing process in rolling mills the steel sheets are put through an acid bath to remove scales. The liquid used in the bath is highly acid. The treatment plant neutralizes the acid pickling liquors. It includes tanks for storing the waste waters before they are treated, tanks in which lime is mixed with the spent pickle liquor, and a large lagoon where the sludge settles out of the neutralized waste waters.

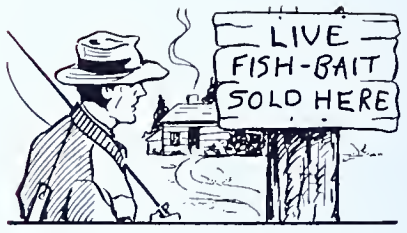
6 Additional Companies Comply

Six additional industrial concerns which had received orders from the Sanitary Water Board to abate pollution of the streams or to submit plans for waste treatment works under the Clean Streams program, have complied with those orders.

The concerns are Citizens Gas Co., Stroudsburg, abated discharge to the stream by changes made in the method of producing gas; Bituminous Service Co., West Chester, abated discharge to stream by changes made within the plant; Sommer Maid Creamery, Doylestown, abated discharge to stream by connecting with Doylestown sewerage system; Esco Cabinet Co., West Chester, abated discharges to stream by changes made in the plant processes; Aircraft Marine Products, Inc., Glen Rock, abated discharge to stream by constructing basin to receive waste waters amounting to approximately 500 gallons a day. The overflow from the basin is discharged to a series of wells; Curtis R. Wildasin, Penn Township, York Co., abated abattoir discharge to stream by construction of cesspool to handle all fluid wastes. The solid wastes will be hauled away and used for fertilizing purposes.

According to the Law...

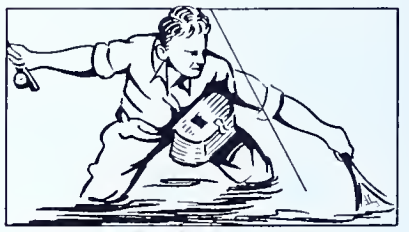
No person may sell or offer for sale any bait-fish or fish-bait taken from any waters of the Commonwealth. Penalty $10.00 for each bait-fish or fish-bait so taken and offered for sale.

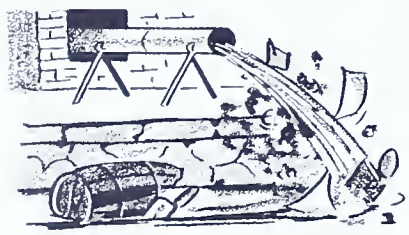




You may not change the course of a stream without first having secured a permit to do so from the Water Power and Resources Board of the Department of Forests and Waters.

The possession limit of any specie of fish at any time is one day's legal catch.





You may not cause or allow any substance deleterious to fish or fishlife to flow, wash or be emptied into any stream. Maximum penalty is $5000.00.

You cannot take frogs or tadpoles on Sunday. A fishing license, not a hunting license, is necessary in taking frogs with a gun or other legal device. The use of an artificial light is unlawful.



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PENNSYLVANIA Angler

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HON. JAMES H. DUFF, Governor

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PENNSYLVANIA ANGLER welcomes contributions and photos of catches from its readers. Proper credit will be given to contributors. Send manuscripts and photos direct to the Editor PENNSYLVANIA ANGLER, South Office Building, Harrisburg, Pa.

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COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA
FISH COMMISSION
HARRISBURG, PA.



The Angler

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The Cover . . .

A typical Member of the force of Pennsylvania Fish Wardens.

Water . . .

"Of all inorganic substances, acting in their own proper nature, and without assistance or combination, water is the most wonderful. If we think of it as the source of all the changefulness and beauty which we have seen in the clouds; then as the instrument by which the earth we have contemplated was modelled into symmetry, and its crags chiselled into grace; then as, in the form of snow, it robes the mountains it has made, with the transcendent light which we could not have conceived if we had not seen then as it exists in the foam of the torrent, in the iris which spans it, in the morning mist which rises from it, in the deep crystalline pools which mirror its hanging shore, in the broad lake and glancing river, finally, in that which is to all human minds the best emblem of unwearied, unconquerable power, the wild, various, fantastic, tameless unity of the sea; what shall we compare to this mighty, this universal element, for glory and for beauty? Or how shall we follow its eternal cheerfulness of feeling? It is like trying to paint a soul."

—*Ruskin*

Master Angler of Sullivan County

Veteran Caught The Big Ones With Cheap Tackle, Using Only Worms As Bait

By WILLIAM BOYD

He lived with his old, gray-haired wife in an isolated frame house in the most thinly populated section of Sullivan County, which all together has only enough people to make a good-sized borough. During trout seasons he spent the daylight hours fishing.

In my many years of angling I have known a number of men very adapt at catching trout, but this friendly old fellow in the "sticks" could give the best of them a handicap and beat them any day in the season at hooking "speckled beauties."

How he did it, I do not know, for I never had the privilege of seeing him in operation along a trout stream. In fact, he plainly shunned companionship when it came to trout fishing. I suspect others cramped his style, so he preferred to be alone when visiting his favorite holes and riffles in the Sullivan County streams adjacent to his lonely place.

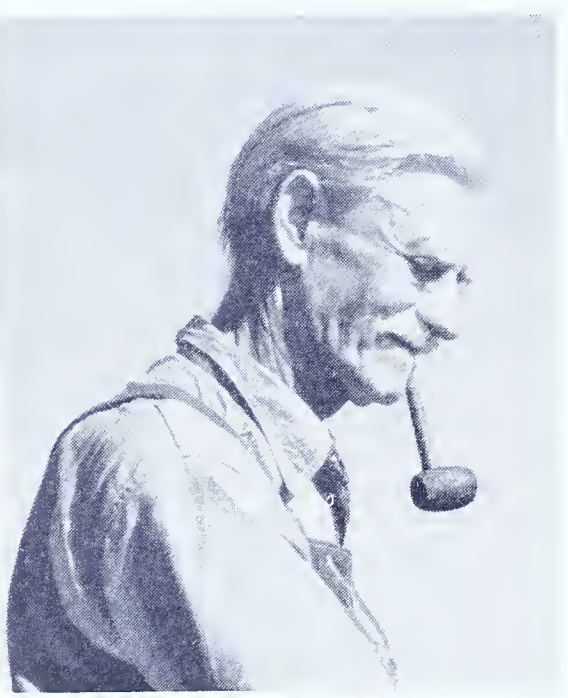
I recall my first visit to this old chap's stamping grounds. His step-son took me and my good friend, Doc, there early in this particular trout season with the definite promise we'd enjoy excellent trout fishing.

Our host's old mother, second wife of the master angler of whom I am writing, had ready for us when we arrived a very inviting breakfast of buckwheat cakes and canned sausage. I remember how she bustled around the big farmhouse kitchen that crisp morning and how I marveled at her activity. Even then she was so old she was quite stooped and one had to shout to make himself understood, for her hearing was almost entirely gone.

Her husband, several years her junior although quite ancient in his own right, didn't permit us to linger long over that satisfying breakfast.

"We better be gittin' out on those streams," he said as he pushed back the antique plank-bottom kitchen chair on which he sat. "There are some guys from over in the coal regions up here this spring and we'd better beat 'em to the good holes."

Dawn had but recently broken when we stepped out on the back porch. I had ben wondering what sort of tackle the old angler used but wasn't too surprised when he lifted from the corner of the porch, where its tip rested against the weatherboards, a steel telescope rod such as could be purchased



THE OLD ANGLER

at any cut-rate sporting goods store for $1.98.

The old fellow stepped down off the porch and I was curious to see what he was going to do about a creel, for he had his rod in his hand and obviously was all set to start out. Then he reached under the porch steps and produced a pail with a wire handle. On it was a paper label indicating the bucket originally had contained something which his old helpmate had used in the kitchen.

I inquired if he intended carrying his minnows in the bucket and he replied:

"Naw, son, that there's my fish holder. I like my trout nice and fresh when I get 'em home, so I keep 'em alive in this here pail." And later in the day I learned this was the truth and that he hadn't been kidding me, which I had suspected at the time.

Further, he wasn't using minnows. All he had for bait was red worms dug in the abandoned barnyard on his place. These he carried in a baking powder can stuffed in his overall pocket.

I wonder, too, what he was going to do about negotiating the streams he fished, for on his feet were a pair of battered and patched hunting gums which reached only half way up the calves of his legs. An old black felt hat with fish hooks stuck through the band completed his fishing attire.

As we traversed the well beaten path leading from the back porch to the dusty road in front of the house, the old man gave us instructions.

"I calculate you fellows better fish Little Muncy this mornin', and if they ain't hittin' there try them two tributaries," and he gave us minute instructions on the location of two small streams to which he referred.

Then and there he left us and we didn't see him again until late afternoon.

"The old rascal!" exclaimed his stepson. "He doesn't want to be bothered with us, but I know he is sending us to the best trout waters in these parts. Now if either of you want to lay a small wager that he won't have nicer trout at the end of the day than the three of us combined I'll take your bets and give you liberal odds."

He told us what he knew about his stepfather's fishing practices as the three of us walked together down the dusty road toward Little Muncy Creek.

"He has never taken me with him, either," our friend said, "but a few seasons ago I stumbled upon him while the two of us were fishing up here. He hadn't invited me to fish with him so I knew he didn't want me too near. He hadn't spotted me, for I was quietly fishing a pool when I heard him upstream, so I slipped into the underbrush of the stream's bank and watched him.

"Pop's just like an Indian in the woods both when he's fishing and hunting, so I wasn't surprised when I saw him crawl on his stomach to a small pool where the water swirled under the submerged roots of an old tree stump.

"He looked at the worm on his hook and then adjusted that old telescope rod of his until it wasn't more than five feet long. Then he reached out cautiously with one arm and dropped his hook into the water around the tree roots. In only a few seconds he just as quietly flipped a dandy brook trout out on the bank by his side, sidled back to where his water-filled pail was standing, took the trout carefully off the hook, and put it in the pail.

"Believe it or not, the old boy took three more beautiful brookies out of that small hole while I watched from my hiding place. Then I sneaked away,

for I didn't want him to know I had been watching him."

I was quite successful that day and was proud of the seven nice trout in my creel when I returned to the house while the sun was just going down back of the green hill on the west side of the valley.

The old angler was trudging down the road from the opposite direction as I neared his place. His step-son and Doc were seated in the shade of a tree in the front yard. I noticed the old fellow's overalls above his battered hunting gums weren't wet, and I wondered how he managed to fish a stream, which he certainly had to cross at times, without getting in over his low shoe tops.

The paper-labeled pail which served him as a fishing creel swung from one hand and his old telescope pole with its cheap reel was carried in the other. He looked just as he did when we parted in the morning and appeared not the least bit tired after his day's fishing.

"Well, boys, how'd yu make out?" he inquired as he approached. He nodded approvingly as we proudly displayed our trout. "Perty good," he said, and started for the back porch.

Thinking perhaps we could show the old fellow up, for he hadn't said a word about his catch, one of us stopped him before he went around the corner of the house with an inquiry as to his luck.

"I'm goin' to dump 'em in a tub," he replied, "come along if you want to see 'em."

I declare I never saw a nicer catch of brook trout anywhere. The old chap's pail was so full of fish they were doubled around inside it, and yet he had only the day's limit catch.

While I didn't measure any of them, I am certain he didn't have a trout under a foot long. He didn't appear to think this was anything unusual and commented only on one fish he had. This was a 14-inch brookie that was the prettiest thing of its kind I had ever seen. Its fins were a brilliant red and its belly was only a slightly less bright red.

"That there's a real old native brookie," he explained calmly as he held the live fish in his two hands. It certainly was a beauty, broad and heavy, beautifully colored because it was still alive.

Three or four times since then I have fished with—or rather near—this skillful old angler, and always he returned with a remarkable catch of trout. This is the only kind of fishing the old man does, doubtless because trout are the only game fish near his isolated home.

However, on one occasion he told me that many years before, when he was a young man, he worked in Pittsburgh steel mills and spent his vacations fishing for big game fish of one kind or another. Eventually the nostalgic call of his boyhood home in the mountains of remote Sullivan County took him back, and since then he had no desire to be anywhere else.

His means evidently being sufficient for the simple needs of him and his wife, he remained contented and happy, fishing in the spring and early summer and hunting in the autumn.

Twice I hunted with him, once for small game and again for deer. I found him almost equally as skillful at hunting as he was at fishing, probably because he had done so much of it that he knew the habits of wildlife in his familiar mountains and woods.

The hospitality he and his wife displayed was ample evidence that they enjoyed the company of others even though they must have spent weeks at a stretch without companionship other than that which each provided the other.



We found the fishing in Little Muncy quite satisfactory.—Boyd

Deer season, the step-son told us, was like old home week at the Sullivan County spot, for year after year a party of deer hunters made the home of the old folk its headquarters, the old man acting as captain of the crew.

Many a big buck fell before the guns of hunters whom he directed, for he knew all of the crossings and could place the "watchers" where the deer would come out to them when the "drivers" whom he led barked like dogs to start the deer moving from their forest hideouts.



Sullivan County has some very good trout streams.—Boyd

Tarnished brass, nickel and copper spoons can be instantly restored to the original brightness by rubbing them with good household silver polish. If the polish isn't handy use a paste made of common salt and vinegar. Rust should be removed with a piece of fine emery cloth.

Spit the tail of a pork rind to give it additional wriggle when it is drawn through the water.

Of some 150,000,000 pounds of fresh water fish produced in the United States annually, nearly two-thirds comes from the American waters of the Great Lakes.

A good casting reel is built with the same precision as a watch and deserves like treatment and care.

Kill Less—Catch More

His Royal Highness

By Dick Fortney

FOR the red-green-orange spell he can weave over the smartest trout. For the exalted position he holds in the fly box of almost every angler. For the long-time popularity he has enjoyed, and for his survival of a lot of the modernizing fad that has radically changed some of his brothers—

For all these things, we nominate a king for the domain of trout flies.

He is the Royal Coachman.

There are other trout flies which are universal favorites and which also are efficient fish-takers.

But the Royal Coachman has the dash and color of a monarch.

He looks like no living thing.

At least this writer never heard of an insect, fish, animal, bird or reptile that has a red body with green edges, an orange tail with black bars, with a speck of gold as a finishing touch at the rear of the body, not to mention brown—and sometimes white—legs.

The Royal Coachman has all those features, whether he be made up as a floating dry fly, a bedraggled wet fly, or a miniature streamer.

So much for his appearance.

As for his popularity, it seems logical to explain this feature of His Royal Highness by the fact that he ranks as a top-flight attractor—that is, a fly that will interest trout when they are ignoring other more conventional patterns of flies.

Another factor that certainly cannot be overlooked is the fact that the Royal Coachman is easily seen when floating on the water—and that is important for those of the angling fraternity who have to struggle under the handicap of bifocal glasses.

Be the reasons what they may, it's a safe bet that the vast majority of trout fishermen in Pennsylvania regard the Royal Coachman as a standby. Legions of anglers would not think of going astream for a day without a supply of the flies of this pattern in their fly boxes.

Of course, there are some dissenters. We know one chap who has a peeve against the Royal Coachman. He'd rather get skunked than use it. He prides himself on his insistence on using flies that really represent natural insects.

"Why, that danged blob of color doesn't look like any insect," he once told me in scorn. "I have more respect for trout than to use that fly. If I can't catch fish on regular flies, I'll go without 'em."

I like the guy, so I didn't point out the fact that I was having a lot of fun and he wasn't interesting many trout, although he is as good a trout angler as can be found in Central Pennsylvania.

There is a type of Royal Coachman to suit every angling problem. First, there is the conventional dry pattern. Then there is the bivisible. Third is the conventional wet fly. Fourth is a variation of the wet fly best described as a miniature streamer. All four patterns have the same specifications, however.

The body is a brilliant red, with a collar of green peacock herl back and front. The hackle is brown. The tail is made of whisps of a golden pheasant tippet or whisps of brown hackle. The wings are white. The tag is a twist of gold wire at the bend of the hook, just aft of the wrapping of herl that forms the back end of the body.

The bivisible has a wing variation. The bivisible is made precisely as is the conventional dry fly, except that instead of a pair of wings it has a couple of turns of white hackle just back of the eye of the hook and in front of the brown hackle.

There also is a fan-wing Royal Coachman, which many anglers have found a deadly lure, the fan-wings being made of matched breast feathers from a wild duck.

The body of the fly is regarded by some fly-tyers as its most important feature. The bright red color is the important thing, and the fly-maker must use care not to make the body too bulky.

Red silk floss is ideal for the job. But the average floss is too heavy, so it's a good idea to separate it into two strands and to use only one of them in constructing the body.

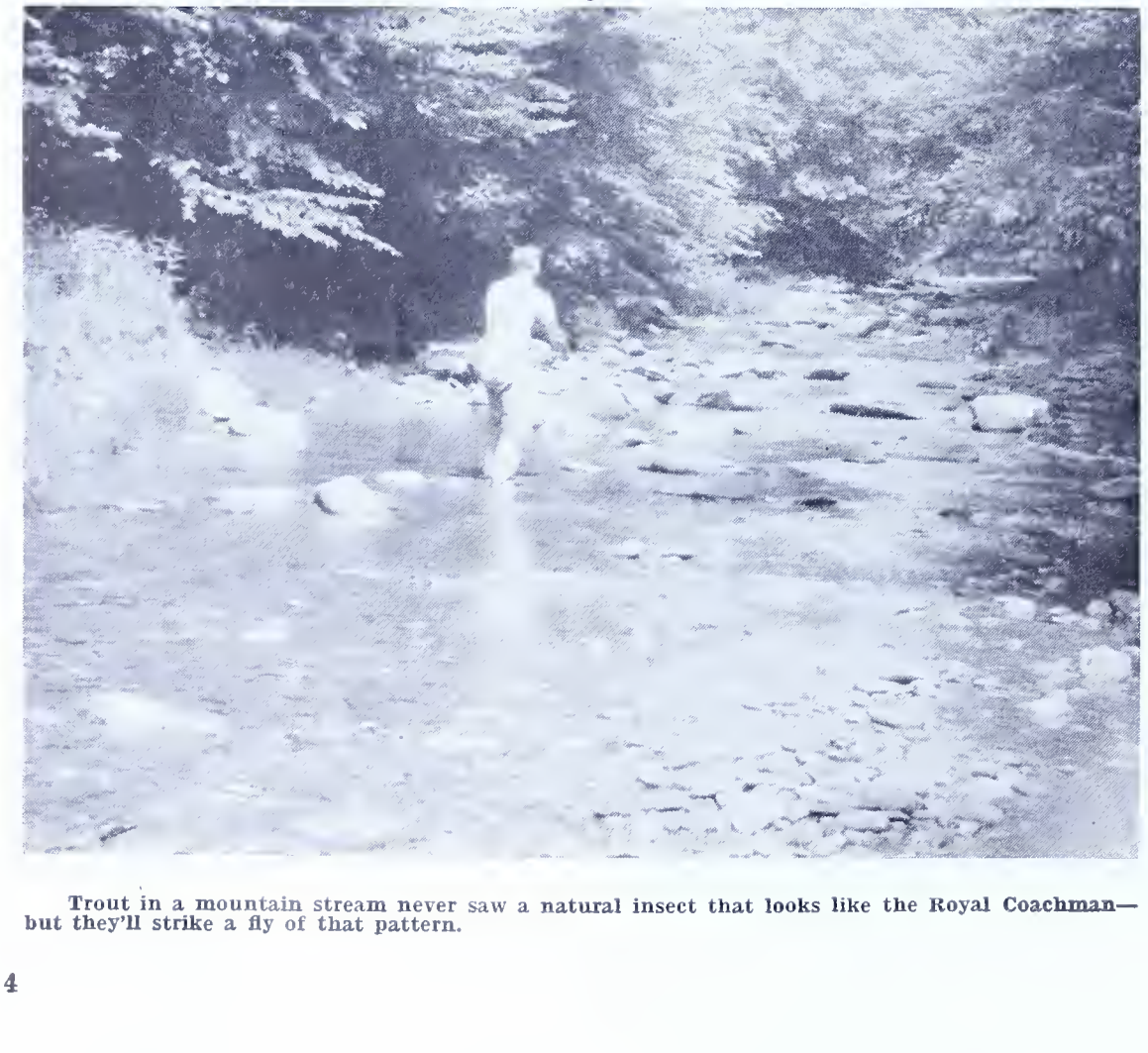
Here's another idea. Some brands of cigarettes have a narrow strip of red cellophane around the package near the top, which is used as an opener. This also is excellent for the red body material. In fact, some anglers prefer it. Floss absorbs water, and the red color becomes very dark when wet. The red cellophane, however, does not change color when in contact with water.

Another point worthy of attention is the tail. It is true that no insect has a thick, bushy tail. But the Royal Coachman does not represent any insect, so veteran tyers like to put four or five tippet whisps in place to make the tail.

The peacock herl used to make the green collars at the ends of the body should be carefully chosen. This material mats when wet, and only the bushy, luxuriant herl should be used.

The gold tag presumably is intended to attract the attention of the fish with its tiny but piercing glitter. Many tyers regard the tag as not essential, however, and certainly no one will argue that omitting it will make the fly less effective.

The wings of the dry Royal Coachman may be made of either quill or



Trout in a mountain stream never saw a natural insect that looks like the Royal Coachman—but they'll strike a fly of that pattern.

hair or hackle tips, which ever the tyer prefers.

The bivisible type of Royal Coachman is precisely the same as the regular dry fly except for the wings. Instead of upright wings, the bivisible has a couple of turns of white hackle on the face of the brown hackle. In constructing this fly, the tyer should keep in mind the fact that the white is intended solely to make it easier to see the fly on the surface of the water. Two or three turns of white are sufficient to accomplish this purpose.

There is nothing in particular to emphasize in construction of the wet Royal Coachman, except that most tyers in this era of hard fishing like sparse wet flies, so the wings should be slender and the hackle should be thin and tied below the "chin" of the fly, like a brown beard.

The miniature streamer type of Royal Coachman is a productive lure. It differs from the others in the matter of the wing.

The wing is made of hair of some sort, in pure white. Care should be taken that the wing is not too bulky, although it may be somewhat thicker than the hackle. The hair wing is tied directly on top of the fly and parallel to the shank of the hook. It should be long enough to extend just a mite beyond the bend of the hook.

The Royal Coachman is effective in a considerable size range. The average fly-tyer is not clever enough to build a complicated fly like the Royal Coachman on a hook as small as Size 18 or 20, but it can be done, and such tiny flies will take trout. Sizes 14 and 16 are the most popular and the most widely used. But a Royal Coachman in Size 12 or even 10 has accounted for many a fine trout, especially on big, rough water.

An angler possessing an assortment of these patterns is well equipped to get action out of trout that are lazy and indifferent. With them he can work those "fishy" spots in a stream that he feels sure harbor trout. Often he can turn to them with success when trout are feeding but have rejected the close imitation lures he possesses.

Yes, we nominate the Royal Coachman as king of the domain of trout flies. He's interesting to make, attractive to the eye of the angler, easy to use, and—most important of all—the trout have a high regard for him too!

Many creeks are mossy at certain periods of the summer, but seldom is the water completely befouled. Bass usually are willing to bite in scattered clear areas of the water.

An empty typewriter ribbon box is fine for carrying odds and ends of flies, hooks, and others bits of tackle which easily become lost.

FISH COMMISSION ACTIVITIES

THE FIELD LABORATORY recently authorized by the Pennsylvania Fish Commission has been delivered and activated. The equipment in charge of Dr. Gordon Trembley and a corps of Biologists is now engaged in making biological surveys of lakes and ponds in a fish management program designed to improve and better expand fishing in the state . . . THE BOARD has authorized the re-building of the BIG SPRING dam near Neville, Cumberland County and REINING POND in Wayne County. Both these areas are owned by the Fish Commission and it is necessary that the dams be re-built in order to improve the properties, both of which are popular public fishing areas.

In the future NO CHANNEL CHANGES in any of the waters of the Commonwealth will be made without first contacting the Fish Commission. The Hon. M. F. Draemel, Sec'y of the Department of Forests and Waters has so stated, thus the Commission will be in a better position to protect the interests of the fishermen.

At the request of the UNIVERSITY OF PITTSBURGH and pending approval by the Dept. of Forests and Waters, the Fish Commission agreed to release a site in the PYMATUNING area for a FIELD BIOLOGICAL LABORATORY. It is the desire of the UNIVERSITY OF PITTSBURGH to construct permanent quarters at the area for the use of the students at the University. Arrangements have been made this Summer so the school can operate in Linesville. The Commission feels that the work which the University will do will be of much benefit to future fishing in Pennsylvania.

A scientific permit was issued to Allen T. Studholme, Acting Regional Director, U. S. FISH AND WILDLIFE SERVICE, Boston, Mass., to use any type of nets on the Floor Control Dams on the Youghiogheny Reservoir and the Crooked Creek Reservoir in order to carry on biological studies.

NURSERY WATERS. The following areas were closed as nursery waters for a period of five years: BERKS COUNTY—*Little Furnace Creek,* tributary to Furnace Creek. CRAWFORD COUNTY—*Pymatuning Reservoir,* the area extending from the spillway of the dam to the weir erected across the stream, a distance of approximately 500 feet. MONROE COUNTY—*Lower Brodheads Creek,* from upper Percy Crawford Bridge to Lower Percy Crawford Bridge, approximately 500 yards. *Reseca Bushkill Project,* from Bridge on Route 402 to a point at the base of the Reseca Falls pool, a distance of approximately 500 yards. LUZERNE COUNTY—*Kitchen Creek*—that section located in the Ricketts Glen State Park.

COOPERATION WITH SOIL CONSERVATION COMMISSION. C. A. French, the executive Director was authorized by the Commission to enter into an agreement with the State Soil Conservation Commission, which authorizes the cooperation of the Fish Commission where it is possible to do so.

COOPERATION WITH DEPARTMENT OF HEALTH. The Pennsylvania Fish Commission agrees to cooperate with the Department of Health by providing sufficient space at the Bellefonte Hatchery for developing a project on pollution problems. This will be sponsored and financed by the Department of Health with moneys received from the Federal authorities.

DINGLE JOHNSON BILL. The Commission is supporting the passage of the Dingle Johnson Bill, which provides for an excise tax of 10% on fishing rods, reels, lures, etc. If this Bill is passed it will qualify the Pennsylvania Fish Commission to participate in and receive its pro ratio share of tax revenues which is similar to the Pittman Robertson Act. THE DINGLE JOHNSON BILL has passed the House and is now in the Senate.

NYLON GILL NETTING ON LAKE ERIE. A serious situation developed at Lake Erie which is caused by the use of nylon netting. The Commission authorized C. A. French, the Executive Director, to discuss this matter with the officials of the various states bordering the Lake and the Canadian Fish and Wildlife Department and arrange for a conference to be held in Erie in the near future.

The use of nylon netting has introduced new problems both for the industry and for management.

MEETING OF THE BOARD HELD AT ERIE, JULY 10 AND 11, 1949. The last meeting of the Pennsylvania Fish Commission was held in Erie, Pennsylvania, and at that time inspections were made of the Corry, Union City, Tionesta, and Erie Hatcheries and considerable time was spent at the Pymatuning Project, which upon completion will be one of the largest warm water hatcheries in existence.

Aid to More Municipalities

Nine additional municipalities have received a total of $64,825.57 in grants-in-aid from state funds in payment of part of the cost of preparing plans for sewage treatment works in compliance with orders of the Sanitary Water Board under the Clean Streams program.

The latest checks have been issued to Titusville, Crawford Co., $5,172.85; Sheffield Township, Warren Co., $2,125.25; Scottdale, Westmoreland Co., $7,024.13; Mount Union, Huntingdon Co., $2,853.75; Pleasantville, Venango Co., $591.03; Harrisburg, Dauphin Co., $29,231.43; Cressona, Schuylkill Co., $1,971.72; Reynoldsville, Jefferson Co., $2,-370.07; Williamsport, Lycoming Co., $13,-484.34.

The latest payments bring the total amount paid from state funds for the preparation of plans for sewage treatment works under the Clean Streams program to $680,192.92, received by 123 municipalities. Under that program communities receive up to 50 percent of the cost preparing plans for sewage treatment works. The cost of those plans are based upon the 1942 cost of construction.

The Bluegill

Lepomis macrochirus

Among anglers who pursue the sport of panfishing, the unanimous choice, for both scrap and downright good eating, is the bluegill. Just as the largemouth black bass is appropriately called the king of American gamefishes, the bluegill certainly rates as the prince of panfishes.

Nearly every angler fondly recalls barefoot boyhood days when a jaunt to the "ol' fishin' hole" seldom failed to produce a dandy string of bluegills. Co-operation seems to be the characteristic of this piscatorial bantamweight.

Be it a bent pin with a piece of sandwich meat, dangling from wrapping string tied to the finger of a youngster, or the accurately placed dry fly—the bluegill shows no preference in personalities. When on the feed, and this is most of the time, the bluegill will take a bite of anything remotely resembling food.

For a session of utmost fishing enjoyment, with delicious eating the reward for a heavy creel, no panfish sport surpasses that which can be had with a light fly rod, once the bluegills are located. They seem to school readily, strike vigorously and feed often—a most inviting combination for angling sport.

However, despite the greediness of the smaller bluegills, which makes them easy victims for the frying pan, the larger brethren are much more cautious and selective in their eating habits. Catching the limit of bluegill heavyweights requires study, skill and "know how"—but, the satisfaction is worth the effort.



9¾ lb. Walleye, 28¾ inches long, caught by O. F. Bricker, R. D. 1, Irwin, Pa., October 30, 1948. Allegheny River—Thompson's Eddy near Tidioute, Pa. Caught on Shakespeare Midget Spinner belonging to E. R. McLaughlin, proprietor of Cloverleaf Cottages at same location.

Names—The bluegill is the most widely-known member of the sunfish family and therefore subject to a sizable variety of nicknames. The most common are: blackear bream, blue bream, copperhead bream, brim, blue sunfish, coppernose sunfish, sunfish, sun perch, bluemouth sunfish, polladee, blue, and punkinseed.

Characteristics—The coloration of this fish will vary greatly according to water conditions, but usually the back is dark, olive-green with a purplish luster. Chain-like greenish bars run girthwise. The belly often is a brilliant red-copper color while the cheeks are an iridescent greenish-blue. The fins are a deep green and the gill covers a velvety black.

Range—Generally speaking, the bluegill clan abounds in the Great Lakes region, the Mississippi Valley and the South Atlantic states. However, it has been found in nearly every part of the United States and Canada.

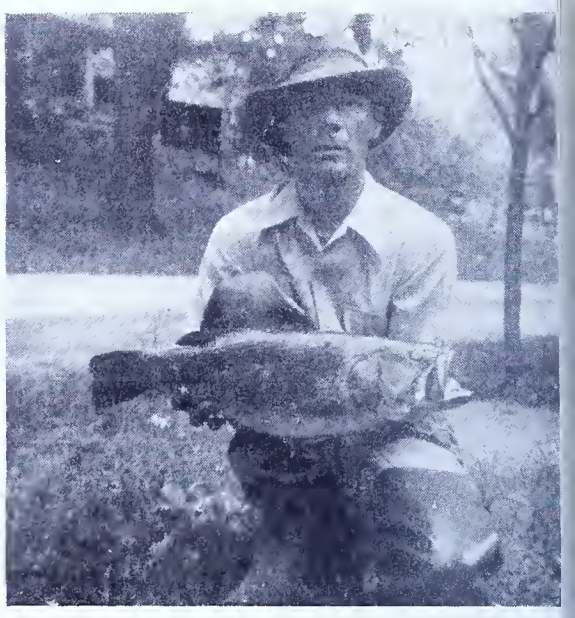
Its favorite hangouts are brush piles, lily-pad fields, stumps, bridges, docks, boat landings, weed beds or just any deep hole or pocket wherever there might be aquatic food.

Size—Although monster bluegills are constantly being reported, the average size will approximate ½ pound. By the fisherman's thumb rule, a bluegill from 6 to 8 inches is a "nice one," from 8 to 10 inches is a "dandy" and anything exceeding 10 inches is a lunker.

Although no official records have been recognized, a number of authentic catches between 2 and 3 pounds have been recorded in various local fishing contests. These are as exceptional as a 60-pound muskellunge, a 15-pound largemouth bass or a 4-pound crappie.

Flavor—Regardless of the water it inhabits, the bluegill can be given the blue ribbon for excellence in flavor. The meat is sweet and firm, and it is practically no trouble to prepare for the skillet.

Foods—It has been said with conviction that the bluegill will eat anything digestible and is the nannygoat of the fish family. Its favorite foods are small minnows, worms, grasshoppers, crickets, countless insects, small crustaceans, as well as any candy, popcorn or picnic leftovers tossed its way.



John Paul Brown caught the large mouth bas he is holding on October 11th last year on a live frog while fishing Sandy Lake at Sandy Lake, Pa. The bass was 21½ inches long and weighed 7¾ pounds.

Lures—At times, any lure that a bluegill can get into its mouth will take the limit.

Again, it will take a skillfully manipulated fly to produce the larger specimens. Ordinarily, the most effective lure is a sponge-body, rubber legged spider, but many fly fishermen find effective any of their pet trout flies in size 10 or 12.

Methods—Although by far the greatest total of bluegills is taken by still-fishermen using garden worms for bait, more and more fly fishermen are finding these little scrappers great sport on light tackle. Spat-fishing with a bait rod and spinning with small lures also produce nice catches.

Tackle—For just plain "bobber fishin'" the outfit is widely known and easily obtainable. An 8 or 10-foot cane pole with a length of line as long as the pole, a light, gaudy bobber, a split-shot sinker, a size 3, 4, 5, or 6 Carlisle hook, a can of worms—and, a fisherman is all set to enjoy some downright fun when he locates a school of bluegills.

For those with sportier tastes, a fly rod will furnish plenty of thrills. In selecting a fly rod it is well to keep in mind that while lightness is to be desired, the rod should still possess enough backbone to handle bass which will strike readily at small lures.

Especially suitable for this type of fishing is a trout weight rod made of split, tempered bamboo in the 8 or 8½-foot length, built on a No. 1½ or 1¾ ferrule. These rods will weigh from 4½ to 5 ounces and balance properly with an E or F level fly line.

Leaders 4 to 7 feet in length, testing 4 to 6 pounds are recommended. In extremely clear water, an extra tippet, size 1X or 2X, will produce when the blues are wary.

For enjoyable fishing and for best results, the line should be dressed before every trip in order to keep it floating throughout the day's fishing. The reel can be either single action or automatic.

Among the favored artificial lures are: rubber spiders or nymphs: cork-bodied bugs, spinner-and-fly combinations, small bucktails with tiny pork strips streamers, wet and dry flies, small spoons, popper spooks, small bass bug spooks and small wilder dilg minnows.

The fact that the bluegill can be taken in so many ways makes it a favorite of the common fisherman. While some game-fish require expensive tackle and arduous preparations, the prolific bluegill will delight the clumsiest angler by making a bobber go crazy.

Ounce for ounce, the battling bluegill is the most concentrated package of fun in the entire fish family—if you care to take the word of that majority of fishermen who consistently bring home bluegills instead of alibis.

Helgrammites are amongst the best of bass bait and while not generally used for trout have been the downfall of many an old "brownie."

A good catfish bait is made by peeling the hard shell from the tail of the crab and using it with the white meat exposed.

A small amount of glycerine added to dough bait for carp will make it more attractive as it adds a sweet taste.



Ray Eichner of Quakertown and a nice rainbow trout from the Little Lehigh River. The fish was caught July 17, '48 and weighed 3½ lbs. and was over 20 inches long.

THE FLY ROD FOR BASS

By Don Stillman

There are few forms of sport fishing in which the angler has a wider variety of lures from which to choose than fly-casting for black bass. The list includes scores of patterns in wet-fly and dry-fly designs, cork and hair-bodied bugs and minnows, streamers, light pork-rined spinners and small spinner combinations used either with or without flies.

In lake fishing the action must be imparted to the lure by the angler, and usually this is done by raising the rod tip and stripping in the amount of line which conveniently can be recast in one shoot.

The floating lures, such as bass bugs and feather minnows, seem particularly effective on many Eastern waters. These lures are cast and retrieved either with a slow, steady motion or with short jerks, with pauses of varying duration between the movements. Some anglers cast their lures and permit them to remain motionless on the surface of the water for as much as five to ten seconds or even longer.

In stream fishing for black bass the floating bug type of lure is handled much the same as a trout dry fly—that is, it is cast upstream or diagonally upstream and floated down with the current over or near the supposed haunt of the fish.

The beginner at fly casting for black bass might select a rod nine or nine and one-half feet in length weighing from about five and one-half to six or seven ounces. If the heavier lures are to be used the rod should have plenty of backbone, for the constant casting of heavy lures eventually will put a set in almost any rod, and a light, flexible rod will go to pieces in short order.

Reel and line should match the rod, the same as in trout fly casting, except that this writer prefers a reel large enough to carry ten or twenty yards of filler line under the casting line. It doesn't happen often, but once in awhile you may hook a really big bass which may make a long run.

Six-foot, heavy, single gut leaders usually are used for wet-fly fishing, while the special "bass bug leader," four and one-half feet in length and tied with a large loop on one end so lures may be changed easily, is preferred by many anglers for use with bugs, feather minnows and spinners.

When it comes to lures, the angler may indulge his own fancies. My list includes wet flies on hooks, sizes No. 1 and No. 2. Patterns, Parmachenee Belle, Lord Baltimore, Yellow Sally, White Miller, Silver Doctor and Black Gnat.

Bass bugs—With cork and hair bodies.

Feather minnows—White and red, white and green and yellow.

Streamers—All white, white blue and silver, and Parmachenee Belle.

A few nickel and copper spinners, sizes No. 1 and No. 2, and a few No. 1 ringed flies.

A bamboo rod should be waxed with a good grade floor or auto wax regularly to protect the varnish which protects the rod itself.

Oil your casting reel at least once each hour of fishing with a good grade of very light oil and you will save the reel and your arm, don't forget the level-wind shaft.

A bucktail worked back and forth in short jerks will sometimes produce when other methods fail, don't hurry, it may take as long as several minutes at the same spot to get your fish excited enough to strike.

When fast on to a good one don't rush him, a fish that is held quiet for the first minute or so will be landed much quicker than one that is badly scared and excited, excitement on either end of the line is in the fish's favor.

Use a black surface plug at night for that old small mouth, move it slow and be sure it makes the proper commotion.



R. Clair Van Dyke, popular sportsman of Adams County, and the excellent large brown trout which he caught in the Conewaga Creek near Arendtsville. The fish weighed 4¾ lbs. and measured 25½" long. Adams County fishermen have hailed it as the largest trout caught in their county.

Dam Trouble

By Lee A. Diehl

FROM the viewpoint of fishermen, especially bass fishermen, the greatest tragedy in recent local history is the abandonment and consequent decay of the once familiar grist mill. Because of their ruin fishermen in many Pennsylvania localities look with longing on past angling glories, view with disgust present deplorable stream conditions, and see the future through very dark glasses indeed. Many economic factors of modern life have contributed to the passing of these landmarks. While their abandonment may have been an economic necessity their passing poses conservation problems as yet largely unsolved. In fact, most of these problems have apparently not even been recognized by the fishermen who would benefit most by their solution. An intelligent and vigorous attack on the problems presented by the gradual ruin of mill dams would do much to change the dark glasses to ones of rose.



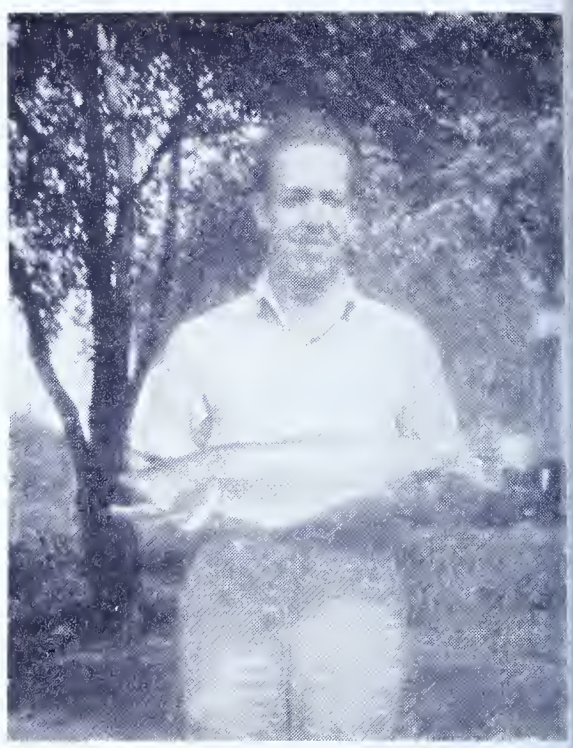
Archie Graham of Franklin, Pa., and the fine muskellunge which he caught in French Creek near Carlton. The muskie, claimed as one of the largest taken in that area for many years, measured 43" and weighed 17 lbs. Photo by Irving J. Reid, Franklin, Pa.

In its heyday the grist mill, as the name indicated, was set up primarily to grind various grains for local farmers. All were dependent on water for power. A dam, usually of wood construction, impounded water which was led through a race to the wheel in the mill. This water-powered wheel provided the energy to turn other wheels which operated the various grinding machinery. As these mills ceased operation the dams were no longer necessary. Through neglect they were, one by one, washed away and the streams reverted to their natural state. Therein lies the tragedy, recognized or not, for thousands of Pennsylvania fishermen who depended upon local creeks for their angling enjoyment.

As an example of the effect of mill abandonment the upper Conodoguinet Creek is typical. As recently as twenty years ago there were at least seven dams in operation on this creek between the towns of Roxbury and Newville. Prior to that time there were even more. The names of these dams—Roxbury, Lurgan, Bingham's, Mongul, MacClay's, Ramp's, Peiffer's—were familiar to all fishermen of the area. All of them now belong to the past and their passing is largely responsible for the unhappy plight of the fishing fraternity in their vicinity. Similar deplorable conditions exist over much of southern Pennsylvania in dozens of creeks. Streams once famous for their excellent bass fishing are now nearly depleted of worthwhile fish. Many an angler is now fishing them for old times sake, not in the expectation of making a catch.

Frequently the question is heard, "Why don't we have fish anymore?" Usually the answer is, too many fishermen—not enough fish. This makes an obvious, easily believed answer. But, is it true? Doubtless it is, but only partially so. It can be established that many other factors of equal or greater importance are involved.

The Conodoguinet previously mentioned covers less than twenty miles in that part which lies between Roxbury and Newville. Of those twenty miles there were formerly at least



This 24" brown trout weighing 4 lbs., 7 oz. was caught in Kilwell Creek by Robert Benton holding it, of Oil City.

seven miles of impounded water varying in depth from three to twelve feet. These seven miles of water contained scores of favorite fishing spots which, added to the natural holes of interdam areas, provided a wide choice of fishing water for the angler. Now that the dams are no longer in existence fishing is of necessity concentrated on the pitifully few yards of natural stream which still has sufficient depth to carry a more or less satisfactory fish population. The loss of seven miles of fishable water out of twenty miles of stream cannot help but seriously affect the quality of fishing.

What are the results, then, of this over-concentration of fishing? The few spots remaining to fishermen have been virtually "fished out." Anglers are forced to further deplete these limited waters, or to seek out other areas (also usually over-fished), or to give up fishing as a hopeless recreation. Many are accepting the latter alternative. In view of the modern hue and cry of adults over the increase in juvenile delinquency it is difficult to understand why a resource so rich in human values, so potent in the development of good sportsmanship, and so able to promote good citizenship, to say nothing of its contribution to good living, should be so long ignored. If we adults are to properly exercise our trusteeship over natural resources for the benefit of future generations it is about time we get busy, and at the same time enlist the aid of youngsters who also have a stake in our work.

Loss of water is but one problem created by the abandonment of mills. In addition, fish have been deprived of homes, of places of security from

nemies, of protection from floods, and f cooling depths so necessary in summer. Fish, like humans, are now facng a man-made housing shortage. Undercut banks, underwater roots, ogs, and snags all once under the impounded waters of the mill dam, and avorite homes for a host of fishes, re now under water only at flood ime. Homes and havens thus detroyed place fish at the mercy of nan, hawks, cranes, turtles, snakes, accoons and a host of other enemies. No longer can the bass escape to the lepths, or to his hollow sunken-log ome, or to the haven of tangled tree oots. These are all largely destroyed. Nor can the fish, during the heat of ummer, retire to water deep enough o afford shade and cool enough to rovide extra oxygen. The depths, too, ave been destroyed.

Apart from the anglers loss the loss f human playgrounds has been conderable. In fact, it would be safe o assess the purely recreational loss s being tremendous. Youngsters, and ldsters too, frequented the "old swimming hole." Boating, swimming, anoeing and winter skating were all art of the value of the mill dam. Though these dams were privately wned they became, in a very practical sense, public parks. People in general seemed to take it for granted hat the dams were for their enjoyment. It is a testimony to the kindliess and generosity of the owners, who made all the repairs and did all he work, that this feeling lasted as ong as the dams.

In addition to their value to fishermen, campers, canoeists, trappers, unters, and skaters the dams had a robable conservation value in other ess obvious ways. Though the acuracy of the following ideas needs cientific investigation they are worthy f mention. From observation it ppears that the dams helped to naintain a more regular flow of water n all seasons. Excessively low water vas rare. Unnecessary and unwanted quatic vegetation was held to a minmum in areas of deeper water. Some egetation is necessary in our streams ut not the choked condition found n some of the abandoned dams. They erhaps raised the level of the water able of nearby lands, in some cases distinct benefit to farmers. They ertainly helped to decrease the load f sediment carried by the stream and educed to a minimum the muddy vater periods after heavy rains. All hese things and doubtless many more were lost when the dams were ruined hrough neglect.

In all sportsmen's groups stream improvement, fish culture, and conservation are main topics for discussion. Restoration of mill dams would be an active step in all three directions. Bass rearing ponds would be less necessary if present fish populations have a chance to increase naturally. Most conservationists agree that the mere dumping of fish into a stream inadequate to support them is senseless waste. Where water acreage, depth, reasonable protection and proper temperatures are lacking they must be provided before restocking will be effective. Restoration of dams would help to provide proper habitat



Eleven-year-old Paul Kline, of Bunker Hill, proudly displays the prize small-mouth bass he landed below the falls in the Swatara Creek at Bunker Hill. .Paul lured the 19", 3¼ lb. beauty with a hellgrammite. He was using 15 lb. test line.

and at the same time provide recreation for many persons.

Sportsmen have a duty to see that their "sporting dollar" provides them with maximum returns. Government officials charged with the spending of the sportsmen's money have a similar duty to see that all money is spent wisely and with foresight. Tax money, whether it be from license fees or other sources should buy not only fish but stream improvement and recreational areas as well. Streams without fish are as poor an investment as fish without streams. To ignore human resources is equally foolish. The three elements; fish, water, and recreation must be considered together. Restore the mill dams and give the fish a break!

What's New in Fishing Books

Reviewed by Hugh Johnson

It has always been a source of wonder to me that, in the great and increasing number of fishing books published, there have been so few written specifically for boys. Basic habits of behavior, including those of sportsmanship, are formed in the early impressionable years, and it is certainly in the best interests of continued good fishing for all that those of us who have achieved a degree of maturity in angling should pass on our lessons, experience, and hopes to the younger generation which is getting ready to take over. This is already being done in the field—but on altogether too small a scale —by fishermen who take the time, and have fun in the bargain, to give the youngsters a tip or two on stream or lake.

But our angling writers have muffed the challenge pretty thoroughly, and if one were to judge only from the age appeal represented on the shelves of fishing literature, one would assume that nobody under 20 years of age ever did any serious game fishing. One exception—Lee Wulff's *Let's Go Fishing,* an excellent, basic book of instruction for boys up to about 12 years of age—has stood alone as angling literature's one respectable curtsy to the existence of a junior brotherhood of fishermen.

So, it is with rousing cheers and congratulations that we shake the hands of Ollie Rodman, publisher of *Outdoors* Magazine, and Edward C. Janes, an associate editor on the same magazine, for having recognized this gap in the 12 to 16 year bracket and for having filled it magnificently by writing *The Boy's Complete Book of Fresh and Salt Water Fishing* (published on July 20, 1949 by Little, Brown and Company, Boston, Mass. $3.50). The section on Fresh Water Fishing has 160 pages and covers bait fishing for pan fish, pickerel, bass, and trout; trolling, plug casting, fly fishing, spinning; and has chapters on streamcraft, ice fishing, how to clean fish, fishing knots, tackle care, and even one on how to catch bait. The section on Salt Water Fishing is short, 108 pages, but contains all the basic information a youngster needs for launching into salt water angling. The book is generously illustrated.

The publisher deserves a word of credit for setting up and designing the book in such a way that it doesn't look like a "juvenile," but reflects the he-man, outdoor informality of the text. The assured success of this book in its appeal to 12 to 16 year old readers springs from the fact that it is written in a friendly atmosphere of equality between author and young reader—none of the patronizing elder uncle stuff—and good techniques and attitudes in fishing are "sold" to the reader without a single *don't* or note of dogma in the whole book. I would like to have seen a chapter on the fundamentals of fly-tying included in the Fresh Water Fishing Section, because plenty of boys de-

(*Turn to page* 13)

PENNSYLVANIA REPTILES & AMPHIBIANS

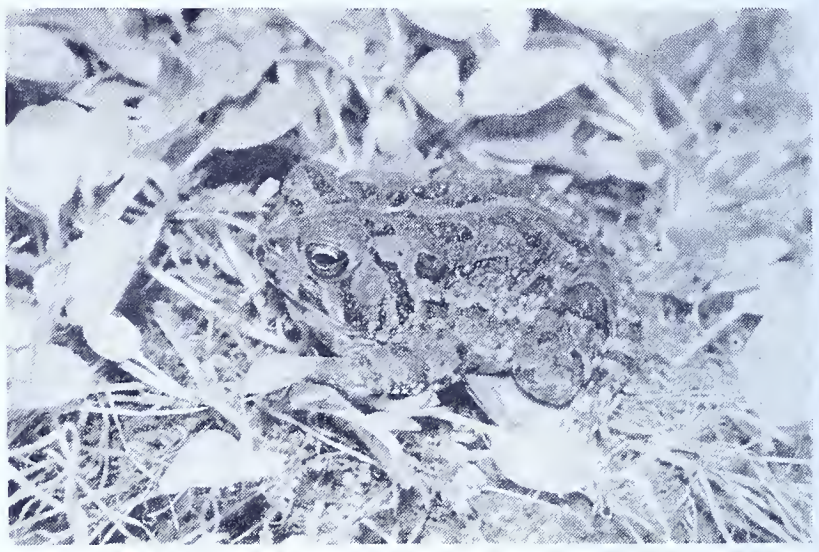
A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

No. 6 . . . Toads



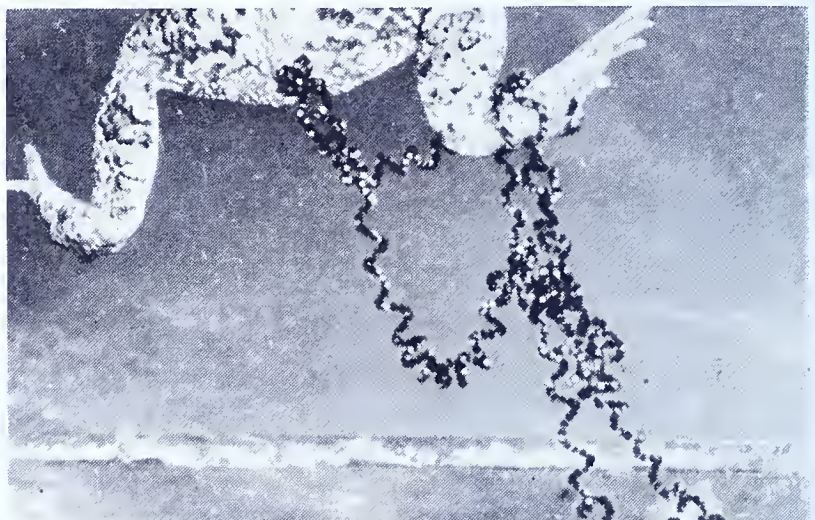
AMERICAN TOAD (Bufo terrestris americanus) . . . Maximum length 4¼ inches; this is the familiar toad of our gardens; has black-spotted belly; each dorsal spot contains but one or two warts; large spiny warts appear upon upper surface of hind legs; trilling of males on warm spring nights is melodious; females lay 4,000 or more eggs in ponds and flooded depressions; economically valuable for its diet of harmful insects; generally distributed throughout the state.



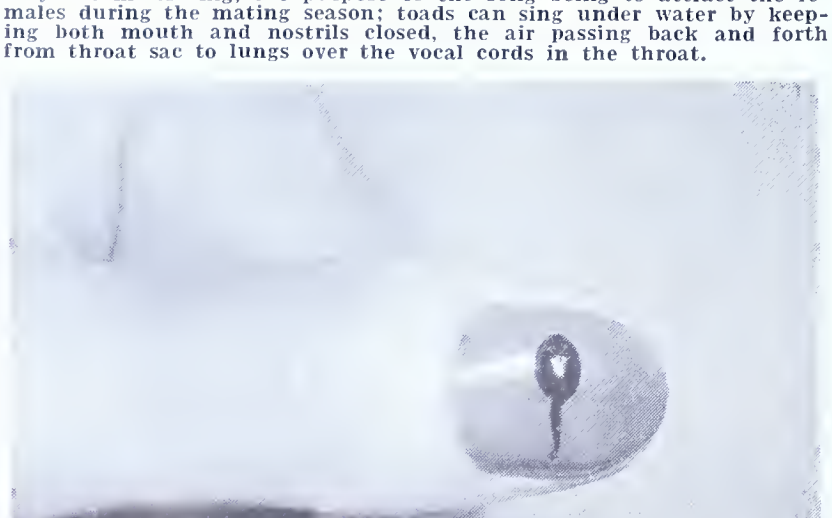
FOWLER'S TOAD (Bufo woodhousii fowleri) . . . Maximum length 3¼ inches; distinuished from similar American Toad by its unmarked or lightly spotted belly, by the presence of more than two warts in each dorsal spot, and by the absence of large warts upon the upper surfaces of the hind legs; song distinctly different from American Toad, likened to the bleating of a sheep or goat; breeds about one month later than American Toad; found in 29 scattered Pennsylvania counties.



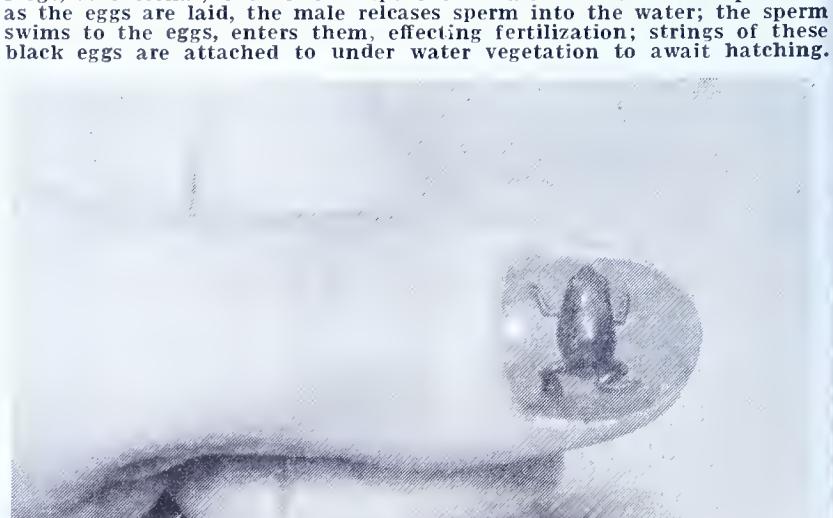
SINGING AMERICAN TOAD . . . An inflated sac on the toad's throat serves as a sounding board to intensify the volume of the song; this is a single sac with air entering it from the mouth through two slits; only the males sing, the purpose of the song being to attract the females during the mating season; toads can sing under water by keeping both mouth and nostrils closed, the air passing back and forth from throat sac to lungs over the vocal cords in the throat.



AMERICAN TOAD LAYING EGGS . . . Toad eggs may be distinguished from the eggs of Pennsylvania frogs because they are laid in strings, never in clusters or singly; fertilization of the eggs, as in frogs, is external; the male clasps the female back of he armpits and as the eggs are laid, the male relcases sperm into the water; the sperm swims to the eggs, enters them, effecting fertilization; strings of these black eggs are attached to under water vegetation to await hatching.



TOAD TADPOLE . . . Toad eggs hatch in from three to twelve days, depending upon the temperature; tadpoles of the American and Fowler's toads are indistinguishable in the field; tadpoles emerge in a very rudimentary condition, possessing neither eyes nor mouth; they develop temporary external gills and a small V-shaped adhesive organ on the throat for clinging to vegetation; in a few days they become typical pollywogs with oval bodies propelled by wriggling tails.



METAMORPHOSED TOAD . . . As metamorphosis from tadpole to toad approaches, hind legs enlarge rapidly; then front legs appear suddenly; as the tail disappears, the little toad leaves the pond; the entire period from hatching to young toad requires 41 to 66 days; actual metamorphosis requires only 2 to 3 days; the old fallacy about "raining toads" comes from habit of hordes of baby toads traveling from place to place during or after a rain; toads do NOT cause warts.

Hurrah For Little Giant Heeby-Jeeby Plastic Porkrind!

By ED ZERN

I picked up an outdoor magazine the other day, and on the back cover appeared a full-page advertisement for a well-known line of lures. Almost half the space was taken up by a photograph showing three fishermen holding a string of twenty-two smallmouth bass, wall-eyed pike and (one) muskellunge. All caught, says the ad, on the advertised lure. And while several of the fish were of a respectable size, none was the sort that you rush to the taxidermist, and at least a dozen should have been turned loose to finish junior high school.

Presumably there were plenty more in the Ontario lake from which these came, and they won't be missed. Nevertheless, I think the advertisement raised several interesting questions. Or at any rate, they interest me. For instance: What did these three guys do with what appeared to be about sixty-five pounds of fish? Possibly the fishermen intended to eat their catch—

The illustration shows an angler, absolutely empty-handed, with the legend to the effect that Gus Glmptch, pictured above, took seventeen smallmouth bass from 1½ to 4¼ pounds in one afternoon and evening on a Little Giant Heeby-Jeeby Plastic Porkrind, and released every damn one of them.

When I see this advertisement, I'll go right down to my favorite plastic-porkrind dealer's and buy a dozen Little Giant Heeby-Jeebies.

Because the fact is, of course, that photographs of dead fish don't prove any more than a simple statement, unillustrated. If I'm willing to take an advertiser's word that the fish in the picture were caught on his lure rather than seined or dynamited, I'll be willing to take his word that the same number of fish were caught and released—and I'll have a lot more respect for the advertiser. So will most readers of this magazine, I suspect.



but how hungry can you get? And if the fishermen were merely interested in food, why didn't they stay home and spend the price of the trip on pork chops or pate de foie gras? But let's assume that the men had some acceptable reason for keeping that many fish. In that case, why did the manufacturer feel obliged to use the photograph in an advertisement? His lures are first-rate—even I can dredge up fish with them—but for my money, his advertising smells to high heaven. There must be some way he could find to convince customers without showing bushels of dead gamefish strewn all over a page, in a go-thou-and-do-likewise way.

But again, let's assume that the manufacturer had his own reasons for using the photograph, as presumably he had. In that case, why don't the outdoor magazines get together, agree to refuse to accept advertisement which in any way glorify the let's-take-everything-the-law-allows boys, and force the manufacturers to find some other advertising technique?

Personally I look forward to the day when I'll see an advertisement which goes like this:

For obstinate cases of rusted hooks, tarnished spoons, rod fittings and reels flour emery in oil may be used. Dry emery cuts too rapidly on any polished surface.

Bacon, lard, butter and other perishable foods can be kept sweet in a tightly capped mason jar sunk in a spring or stream.

To make your fishing plugs waterproof, scratch proof and keep the enamel from cracking and colors from fading, give them a coat of liquid auto wax.

To revive dying minnows put a teaspoon of salt in the water of an average sized minnow pail.

If short of pork rinds cut some from a piece of chamois skin or white rubber toy balloon.

No matter how careful a camp cook is he is bound to scorch the beans or stew sooner or later. If it happens to you just drop one or two small pieces of charcoal into the pot of food and the scorched taste will disappear like magic.

Swatara Creek Becoming Clean

Preventing silt from anthracite operations from entering the streams has extended beyond the Schuylkill River basin under the intensive efforts of the Bureau of Engineering, State Department of Health. It is now reported that clear water is flowing in the Swatara Creek and the streams by which it is formed in Western Central Schuylkill Co. as a result of the installation of desilting systems by coal operators to meet requirements under the Clean Streams program. That stream, which flows into the Susquehanna River at Middletown, has been a heavily silt-laden waterway since the beginning of coal mining along its course nearly 50 years ago. Not only has the silt problem been solved on the main stream, but desilting systems are also keeping the silt from the streams by which it is formed, which are Good Spring, Lower Rausch, Middle and Lorberry Creeks.

At the present time there are 11 breakers and five dredgers operating along the different waterways. The number of breakers was reduced by three during the past year through discontinuance of operations, but one dredger was added to the list during that time. Excepting at one of the breakers where the wastes are discharged to an abandoned mine, the breakers have constructed silt ponds for keeping the silt from entering the waterways.

This accomplishment follows closely upon the heels of the outstanding achievement in the Schuylkill River Basin where all of the 47 collieries along that river and its tributaries now have desilting systems, which it is estimated are keeping more than two million tons of silt annually from those waterways.

Outdoor Recreation Beneficial

The benefits of outdoor recreation and sports afield have been enumerated frequently and this is one case where the doctor takes his own medicine. Did you ever stop to think how many in the medical professions are fishing and hunting devotees? We have checked countless lists of outdoor enthusiasts and MDs. and DDSs. are always well up in the various classifications. Physicians, surgeons, dentists, various specialists and others interested in therapeutics not only prescribe recreative outdoor activities for their patients, but take a good dose of that medicine themselves—hunting, fishing, running dogs in field trials, camping outdoors, wilderness canoe trips, ranch vacations, etc.

There's one feature about fishing that accounts for its tremendous popularity. Unlike the lyric popular during the World War II—"They're either too young or too old"—the very young and the very old, as well as all those in between, can enjoy fishing. The boy with his willow pole and bent pin; the octogenarian situated comfortably on a sloping bank with cane pole and bobber, dunking a worm or live-bait and hauling out (often enough to keep it interesting) a good panfish or even a finny gamester.

A plug with a wiggle will account for some nice bass and walleyes if sunk deep and trolled.

Club Activities



Members of the Mosquito Creek Sportsman's Association and guests work on Mosquito Creek near Frenchville, Clearfield County, to make their second annual Stream Improvement Day a success. A deflector is being constructed.

Clearfield Sportsmen Improve Stream

What can sports clubs do to better fishing conditions in their area?

A good example was set by Mosquito Creek Sportsmen's Association in August when that club held its Second Annual Stream Improvement Day in the Frenchville-Karthaus district of Clearfield County.

By dint of hard work and plenty of perspiration under a hot sun, several miles of Mosquito Creek, a tributary of the west branch of the Susquehanna, was made a better place in which to live for the trout that inhabit it.

Scores of workers turned out for the occasion, and by 8 a.m. several working crews had made their way down the mountain to the Walker Dam, six miles upstream from Karthaus. Here the men, and a few women too, started working north and south on the stream, building deflectors, diverters and dams out of rocks.

These rock structures, built at strategic points along the stream, create deep pools, widen the stream, break the force of flood waters in the fall and spring and create ideal habitat conditions for trout and other fish.

Last year when the club held its first Stream Improvement Day, work in Mosquito Creek was confined to the Corporation Dam section. Next year, it is likely that work will be concentrated near the Shifter Place. In this manner, the entire 15 miles of this mountain creek will be improved for the fish that inhabit it.

Following the day's work on the stream, the club was host to its members and guests at a ham dinner in a grove near Kuhns Field on the Caledonia Pike, five miles from Frenchville.

Club President Paul R. Coudriet was chef. Other officers of the club are: George Rankin, vice president, and Ralph L. Scott, secretary-treasurer.

Fish Warden Les Ogden represented the Fish Commission at the event.

Interesting Views on Fishing

By Fred Carbinere

During the war, there were those who predicted that fishing and hunting would go into a tailspin, but strangely enough even more people turned to field and stream and outdoor recreation to quiet nerves jangled by work and worry. Assurances from military authorities and government officials that "we can all go fishing as occasion permits without any reflection on our patriotism and good intent," were all that was needed to keep interest in angling at peak levels. Let's look at what some of the big men of the country have said:

Glenn L. Martin, industrial tycoon—"If I had my way, every employee of mine would spend his day off in the outdoors, fishing and hunting preferably, but at any rate in the outdoors, where he could build up both body and mental morale for the following week's work."

Herbert C. Hoover, former president—"As a nation, let's go fishin,' and after the war we will find that rod and line will be a real cure for many of our woes."

General Dwight Eisenhower. In a speech to his invasion troops: "Let's get this business cleaned up so we can go home and go fishing."

Average Citizen, "I'm getting my vacation and will have a couple of weeks to do what I've been thinking about all year—get off to a good fishing spot and have some real fun."

Holmesburg Fish and Game News



The women help, too. Here is Mrs. Tom McKinney literally up to her neck in the work of improving Mosquito Creek for the fish.

Prompt Action Saves Fish At Stellfox Pond

Thousands of fish were saved from death recently by prompt action of two fire departments.

The perch, sun fish, blue-gills and cat fish, which were stocked in the Stellfox Pond at the lower end of South Renovo, were perishing rapidly when the water level fell suddenly.

The Chapman Township Fire Department, using their new tank truck equipment, rushed to the scene and gave the fish a chance for life by emptying 1000 gallons of fresh water into the artificial lake. They made the trip twice more, supplying a total of 3000 gallons to replenish the rapidly drying pond.

Meantime the Citizens Hose Co. of South Renovo were busy placing 1600 feet of hose from the nearest connection of the borough water main to give the fish an additional supply. With the reservoir at Halls Run running over the south-side borough with the best water resources in the state appeared to have an ample supply despite the dry spell. President of South Renovo Borough Council Frank Bissett said that the furnishing of water to the popular recreation spot could continue as long as this surplus was evident.

This could be the example and answer to similar situations in other parts of Pennsylvania.

Bradford Sportsmen Win Prizes for Large Fish

A contest for the largest trout caught in the Bradford, Pennsylvania area and which was promoted by a local hardware company, closed with the following results. Brook Trout class—First prize, Millie Stewart, R.F.D. 2, Bradford, weight 2 lbs., length 15¾ in. Second prize, Roy Groves, 2 Sheehan Place, Bradford, weight 1 lb. 11oz., length 12¾ in. Third prize, James Kahle, R.F.D. 3 weight 1 lb. 8¼ oz., length 16½ in. Brown Trout Class—First prize, George Lichner, Corydon, Pa., weight 6 lb. 10 oz., length 26¼ in. Second prize, George Sapko, 191 Clinton St., weight 5 lb. 4 oz., length 25½ in. Third prize, Thomas Hart, 31 Clinton St., weight 5 lb., length 25 in. Rainbow Trout Class—First prize, Red Swift, Corydon, Pa., weight 2 lb., length 17 in. Second prize, Jack Gault, Mt. Alton, weight 1 lb. 11 oz., length 16¼ in. Third prize, Henry Irshman, 51 Seaward Ave., weight 1lb. 3 oz., length 15¾ in. Three awards were made in each division.

WHAT'S NEW

(*From page* 9)

velop an early curiosity about this fascinating hobby, and a short introduction to fly-tying would have fitted beautifully into the pattern of the book. However, this subject might best be handled in another special book for boys and until such a book appears there is always that old favorite—*Tying American Trout Lures* by Rube Cross.

The Boy's Complete Book of Fresh and Salt Water Fishing is enthusiastically recommended by this column. A boy will probably read it through from cover to cover at first, and then—the more important test of a good book—will consult it frequently thereafter for help on specific angling problems.

Small Fish Aid Fight Against Mosquitoes

Small, darting fish, a species which gets credit for aiding the building of the Panama Canal, have entered the Dallas fight against mosquitoes.

Aquarium Director Pierre Fontaine said that he has supplied the health department with numerous Gambusia Affins, which have been prescribed for scores of Dallas' private fish ponds, to keep down the breeding of mosquitoes.

The Gambusia Affins, a species common to Dallas and Texas, is known as the fish that built the Panama Canal because of the part it played in wiping out malaria-bearing mosquitoes in the tropics.

The tiny surface-feeding fish—maximum size for females is one and one-half inches length and males one inch—feed largely on mosquito larvae, destroying the insect before it becomes dangerous.

When U. S. Army engineers faced the problem of wiping out malaria in order to complete the Panama Canal, hundreds of thousands of Gambusia Affins, also known as mosquito minnows, were shipped to the canal area and released in fresh water streams, lakes and swamps.

Visitors to the Dallas Aquarium probably never realized the importance of the diminutive animal as they watched its lightning-like aquatics.

The little fish has another distinguishing note, according to Director Fontaine. It was the first domestic fish sold in the United States as a tropical fish. In the late 1800's a Gambusia Affins sold at about $2, and granddad was probably sure he was getting an imported pet.

The little warrior against mosquitoes is a live-bearing fish. The female will bear 25 to 75 young at one time and she bears every 28 days, Fontaine said.

A surface-feeding fish, the Gambusia Affins has great difficulty in picking food from the floor of a lake, stream or aquarium. The shape of its mouth is such, however, that it has no difficulty in attacking insect larvae on the top of the water.

Because of its liking for mosquito larvae, the tiny fish still upholds its reputation as an aid to public health and as the fish that built the Panama Canal.—Dallas Times-Herald.

Forecasting Weather by Cloud Formations

Cloud formations are harbingers of weather to come and boaters who can interpret them correctly can determine whether or not to go boating or fishing.

All clouds are water vapor condensations, caused when the air is cooled below its dewpoint, the term "dewpoint" referring to the temperature to which air can be cooled without causing condensation. The form they take indicates the weather.

Cirrus clouds generally indicate a spell of good weather followed by rain. Composed of ice crystals, they are wispy, detached clouds of delicate and fibrous appearance. They appear in varied form; sometimes in isolated tufts, in bands drawn against a blue sky, or in branching featherlike plumes. The cirrus are usually colored bright yellow or red before sunrise or sunset, but are otherwise without shading and white in color. They are the highest cloud formations of the troposphere.

Although the cirrus mean a warm air invasion, they usually bring the stratus, or rain clouds, in their wake. Appearance of the stratus indicate rain. The period between the first sign and the actual rain may be two days or more and the storm usually will last as long as it took to arrive.

Stratus clouds are gray, heavy cloud layers which give the sky a hazy appearance. They are low cloud layers and have their base near the surface. When they rest on the ground, fog is formed.

Cumulus cloud formations indicate good weather. Small, white, and wooly, they have a flat base and rounded outlines. Their shape is very irregular and they may be piled or massed in fantastic forms across the sky, or stretched in dainty, puffed balls of white. They generally develop when high clouds are lacking and dissipate by nightfall. Whenever they grow in size a shower can be expected.

Cumulonimbus clouds are the clouds of thunder. A mountainous mass of condensed vapor from whose base rain or snow falls, they bring torrents and wind. Cumulonimbus cloud formations have great vertical development and their summits rise in the form of mountains or towers to tremendous heights. The upper parts of the summits form the anvil. The anvil top is a veil effect that pushes out ahead of the cloud from which the direction of the storm can be determined. — O. B. C.

Bass can be taken from what would seem to be impossible muddy water by fishing a plug with spinners attached just under the surface of the water, fish it slow and if a strike is missed give him another chance as he will be waiting if not nipped by the hooks.



Using a flat-fish, David Guthrie, of Marienville, Pa., took these fine muskies from Tionesta Dam. The larger one measured 40¼" and weighed 19½ lbs., while the smaller one measured 32" and weighed 7 lbs.

Pennsylvania Fish Law Violations

Cases settled during the month of July 1949

ADAMS COUNTY

Bass, Mrs. Robert, R. D. No. 2, East Berlin, Pa. Fishing without a license $25.00
Crisswell, Vernon J., R. D. No. 4, Gettysburg, Pa. Fishing without a license 25.00
Hess, Selmar W., 239 Chambersburg St., Gettysburg, Pa. One undersized bass 10.00

ALLEGHENY COUNTY

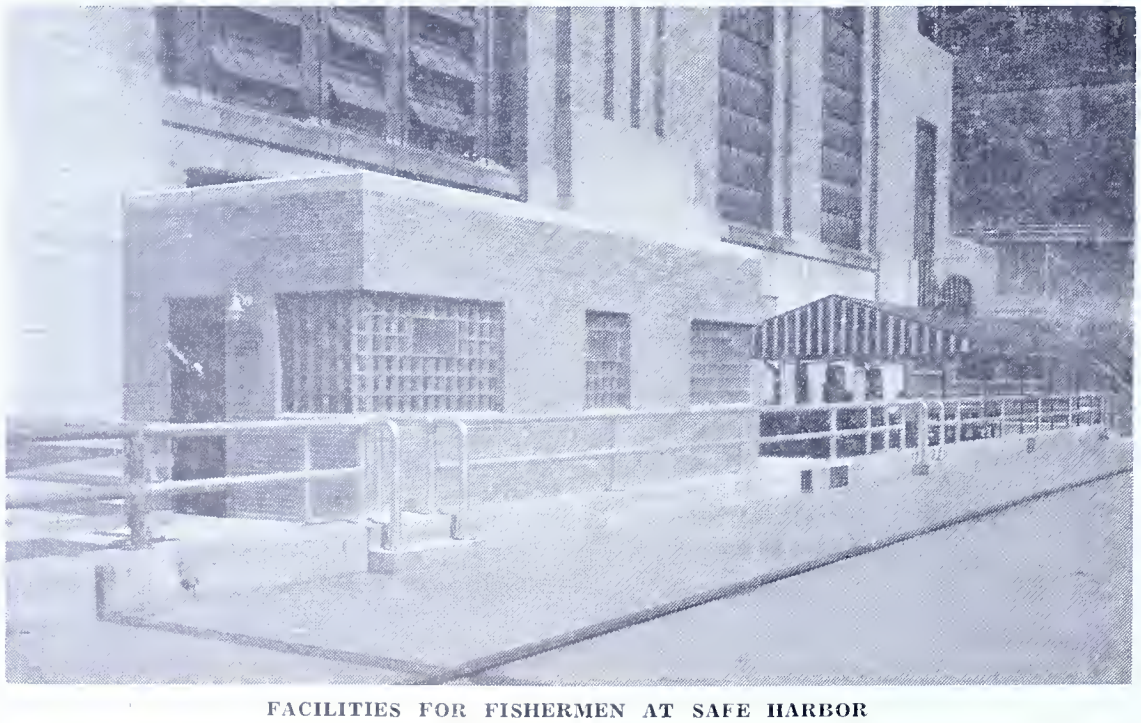
Crawford, Harvey, Belleview, Pa. Fish in nursery waters 20.00
Davidson, Samuel B., R. D. No. 1, Evelyn Drive, Coraopolis, Pa. Operating a motor boat without a license 10.00
Haines, Lester M., 2814 Connecticut Ave., Dormont, Pa. One undersized trout 10.00
Hoover, Joseph, 316 Penn Ave., Pittsburgh 22, Pa. Fishing without a license 25.00
Horelick, Arnold, 2116 Welton Ave., Pittsburgh, Pa. Fishing in nursery waters 20.00
Johnston, John S., Crafton Branch, Pittsburgh, Pa. Exceeding creel limit 10.00
Keck, Charles C., Jr., 264 Colonial Drive, Pittsburgh 16, Pa. Illegal device 20.00
Klein, James S., 972 Fordham St., Pittsburgh 26, Pa. Illegal operation of motor boat 10.00
Luther, Walter H., 822 Washington Blvd., Pittsburgh, Pa. Fishing without a license 25.00
Mazgaj, John, 813 2nd Ave., Brackenridge, Pa. Exceeding creel limit 20.00
Micenko, John, Jr., 1415 Hayes St., Homestead, Pa. Illegal operation of motor boat 10.00
Mulnar, John, 67 Ambridge Ave., Fair Oaks, Pa. Fishing in nursery waters 20.00
Myers, Clyde M., R. F. D. No. 1, Cheswick, Pa. Exceeding creel limit 10.00
Neanor, William, Coraopolis, Pa. Operating motor boat without a license 10.00
Olah, Mike, Wilson, Box 82, Clairton, Pa. One game fish in closed season 20.00
Pollock, Rose, McKeesport, Pa. Fishing without a license 25.00
Sprentz, J. W., R. D. No. 1, Tarentum, Pa. Exceeding creel limit .. 20.00
Vyrostek, Ernest, Jr., 303 Ridgeview Dr., Dravosburg, Pa. Illegal operation of motor boat $10.00

ARMSTRONG COUNTY

Carnahau, Harry, 112 Main St., Leechburg, Pa. One muskellunge in closed season 10.00
Plofchau, Andrew, Cowansville, Pa. One bass in closed season 10.00
Plofchau, Andrew, Cowansville, Pa. One undersized bass 10.00
Shoffner, Myron A., R. D. No. 3, Kittanning, Pa. Illegal operation of motor boat 10.00
Stock, W. L., R. D. No. 1, Freeport, Pa. Fishing without a license 25.00
Wagner, Lorcy, 220 High St., Freeport, Pa. Operating a motor boat without a license 10.00

BEAVER COUNTY

Green, William, 427 Merchant St., Ambridge, Pa. Interfering with an officer in the performance of his duty 100.00
Lemmon, Donald, 119 Mercer Ave., New Brighton, Pa. Operating a motor boat without a license 10.00
Petroski, William, 630 Beaver Road, Ambridge, Pa. Fishing without a license 25.00
Primerano, Pete, Fifth Ave., Koppel, Pa. Lending a fishing license 25.00
Zwierzynksi, Walter, 162 Fourth Ave., Koppel, Pa. Fishing without a license 25.00



FACILITIES FOR FISHERMEN AT SAFE HARBOR

New comfort station and outside eating tables also benches which have been recently installed by the Safe Harbor Water Power Corp. This is for the fishermen who fish the River at Safe Harbor, Lancaster County, Pa.

BEDFORD COUNTY

Dodson, Lloyd H., Hopewell, Pa. Fishing without a license 25.00
Dodson, Mearl, Hopewell, Pa. Illegal device 20.00
Dodson, Stanley, Hopewell, Pa. Illegal device 20.00

BERKS COUNTY

Adams, Paul V., 35 S. Whiteosk St., Kutztown, Pa. Exceeding creel limit 20.00
Angstadt, Paul, R. D. No. 2, Kutztown, Pa. Exceeding creel limit 20.00
Civitarse, Joseph, 440 W. Greenwich St., Reading, Pa. Illegal operation of motor boat 10.00
Flory, Ferand A., 38 Park Rd., Wyomissing Hills, West Lawn, Pa. Fishing in a closed stream 25.00
Raudenbush, Wilbur F., 827 Moss St., Reading, Pa. Fishing without a license 25.00
Schindel, George L., 516 Gregg St., Shillington, Pa. Fishing in a closed stream 25.00
Zinsmaster, Oddie, 2424 Penn Avenue, West Lawn, Pa. Fishing in a closed stream 25.00

BLAIR COUNTY

Burns, E. R., 127 Bedford St., Hollidaysburg, Pa. Violation of the rules and regulations on Spring Creek .. 20.00
Drobnak, John, Box 73, Claysburg, Pa. Violation of the rules and regulations on Spring Creek 20.00
Johnston, Clair M., 419 S. 1st St., Bellewood, Pa. One bass in closed season 10.00
Snyder, Frank B., 900 Hickery St., Roaring Springs, Pa. Fishing without a license 25.00
Spadafora, Philip, 510 12th St., Altoona, Pa. Two undersized black bass 20.00

BRADFORD COUNTY

Blair, Keith, Rome, Pa. One undersized bass 10.00
Frost, Eugene, R. D. No. 2, Burlington, Pa. Fishing without a license 25.00
Merrill, L. A., 1 Ann St., Towanda, Pa. Illegal operation of motor boat 5.00

BUCKS COUNTY

Confer, Cloyd C., Box 473, Croydon, Pa. Two undersized trout 20.00
Longe, Dominic, Cedar Lane, Croydon, Pa. Fishing without a license 25.00

CAMBRIA COUNTY

Beas, Urban, 401 Center St., Johnstown, Pa. Illegal operation of motor boat 10.00
Brauer, James A., 310 Bedford St., Johnstown, Pa. Illegal operation of motor boat 10.00
Crouse, Robert B., 994 Jacoby St., Johnstown, Pa. Lending a fishing license 25.00
Emmerling, William J., 221 Leila St., Johnstown, Pa. Illegal operation of motor boat 10.00
Lesko, Mike, Nanty Glo, Pa. Fishing in a closed stream 25.00
McCullen, Merall J., Nanty Glo, Pa. Fishing in a closed stream $25.00
Pahel, Donald E., R. D. No. 1, South Fork, Pa. Violation of the rules and regulations on Spring Creek 20.00

Penrod, Lester W., 316 Water Ave., Johnstown, Pa. Exceeding creel limit 50.00
Sellers, O. E., 500 Horner St., Johnstown, Pa. Operating a motor boat without a license 10.00
Serenko, Frank, Main St., Portage, Pa. Lending a fishing license 25.00
Tripp, Lee, Rear 1406 Chestnut St., Nanty Glo, Pa. One undersized bass 10.00
Willinsky, William G., 907 Connemaugh Ave., Portage, Pa. Lending a fishing license 25.00
Woods, James B., R. F. D. No. 2, Barnesboro, Pa. Fishing in a closed stream 25.00

CAMERON COUNTY

Wykoff, William L. Sinnemahoning, Pa. One undersized trout 10.00

CARBON COUNTY

Houser, Franklin, Weissport, Pa. Fishing in a closed stream 25.00
Yanero, Lee, Lehighton, Pa. Two undersized pickerel 20.00

CENTRE COUNTY

Hanscom, Everett, Fleming, Pa. Violation of the rules and regulations of Spring Creek 20.00
Heckman, Eugene A., R. D. 1, Spring Mills, Pa. Violation of the rules and regulations of Spring Creek 20.00
Lansberry, William L., Centre Hall, Pa. Violation of the rules and regulations of Spring Creek 20.00
Lomison, Jacob, Howard, Pa. Violation of the rules and regulations of Spring Creek 20.00
Morrison, Orrie A., Jr., Milesburg, Pa. Violation of the rules and regulations of Youngwoman's Creek 20.00
Reichard, Talman, Powelton, Pa. Trespassed on hatchery property with intent to fish 100.00

CHESTER COUNTY

Ellis, John, No. 2 Ross Row, Coatesville, Pa. Fishing without a license 25.00
Flannegan, Thomas, R. D. No. 2, Phoenixville, Pa. One black bass out of season 10.00
Flannegan, Thomas, R. D. No. 2, Phoenixville, Pa. Fishing without a license 25.00

CLARION COUNTY

Miller, Elson, Rimersburg, Pa. Fishing in closed stream 25.00

CLEARFIELD COUNTY

Dobash, Andrew, Winburne, Pa. Violation of the rules and regulations of Spring Creek 20.00
Dolan, Sam J., 229 W. Long Ave., DuBois, Pa. Violation of the rules and regulations of Spring Creek .. 20.00
Duckett, Walter, 127 Clark St., Clearfield, Pa. Violation of the rules and regulations of Spring Creek 20.00
Green, Reese, R. D., Woodland, Pa. Violation of the rules and regulations of Spring Creek 20.00
Gulish, Allen I., Madera, Pa. One undersized trout 10.00
Hepfner, Charles, 460 West DuBois Ave., DuBois, Pa. One undersized trout 10.00
Hutchins, Edward, R. D., Breckport, Pa. Seven undersized trout 70.00
Shoff, Charles E., Box 548, Madera, Pa. Two undersized trout 20.00

CLINTON COUNTY

Eyer, Donald E., Main St., Mill Hall, Pa. Violation of the rules and regulations of Spring Creek 20.00
Flanningen, Guy, Mill Hall, Pa. One frog in closed season 10.00
Motter, Raymond D., R. D. No. 1, Lock Haven, Pa. One undersized bass 10.00
Motter, Mrs. Vivian, Beech Creek, Pa. One undersized trout 10.00
Parini, Salvestore, 124 16th St., Renovo, Pa. Three undersized trout .. 30.00
Schoake, William, Potterdale, Pa. Six undersized trout 60.00
Wade, Melvin M., 361 Farwell Ave., Renovo, Pa. Fishing in a posted stream 25.00
Wheeler, George R., 421 Canal St., Flemington, Pa. Fishing without a fishing license 25.00
Whitmyre, Meryle C., 151 7th St., Renovo, Pa. Exceeding creel limit .. 10.00
Whitmyre, Meryle C., 151 7th St., Renovo, Pa. Two undersized trout .. 20.00
Yoxheimer, Donald, 147 Pennsylvania Ave., Renovo, Pa. Illegal device .. 20.00

CRAWFORD COUNTY

Garnet, Rocco, Atlantic, Pa. Illegal operation of motor boat 10.00
Greleski, Stanley, R. D. No. 1, Hartstown, Pa. Fishing without a license 25.00
Greleski, Stanley, R. D. No. 1, Hartstown, Pa. Two frogs in closed season 20.00
Hogan, Charles, 1053 French St., Meadville, Pa. One pike in closed season 10.00
Thompson, Orris M., 662 Hickory St., Meadville, Pa. Fishing without a license 25.00
Waller, Lewis J., Morgan St., Extension, Meadville, Pa. Illegal device 20.00
Woleson, George, Route 3, Spartansburg, Pa. Illegal device 20.00

CUMBERLAND COUNTY

Frelin, July C., 105 W. Main St., Shippensburg, Pa. Giving false information to secure a fishing license 25.00
Rance, George R., R. D. No. 4, Mechanicsburg, Pa. Fishing without a license 25.00
Yocum, R. S., R. D. No. 4, Mechanicsburg, Pa. Fishing without a license 25.00
Young, John D., R. D. No. 4, Mechanicsburg, Pa. One bass in closed season 10.00

DAUPHIN COUNTY

Thompson, Thelma, 2055 Penn St., Harrisburg, Pa. Fishing without a license 25.00

DELAWARE COUNTY

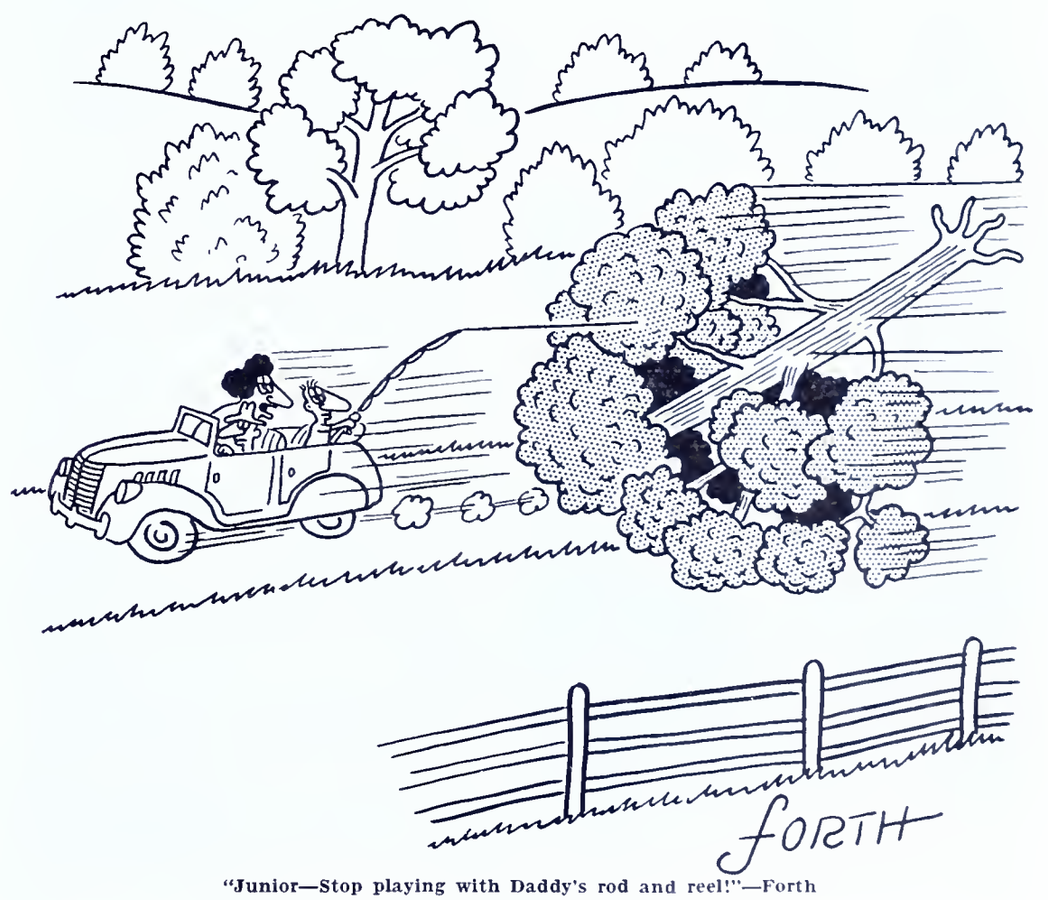
Wellemeyer, Wilber M., 411 Chester Pike, Sharon Hill, Pa. Fishing without a license 25.00

ELK COUNTY

Erich, Albert W., Bucktail Trail, St. Marys, Pa. Three undersized trout 30.00

ERIE COUNTY

Colangelo, Sam, 2214½ Perry St., Erie, Pa. Fishing without a license 25.00
Dunn, Marion R., Box 219, Fairview, Pa. Operating a motor boat without a license 10.00
Johnson, Lee V., 537 W. 11th St., Erie, Pa. Fishing without a license 25.00
Loshe, Joe, 2033 Bird Drive, Wesleyville, Pa. Violation of the rules and regulations of Pa. Fish Comm. 20.00
Pickens, Odell, 533 W. 11th St., Erie, Pa. Fishing without a license 25.00
Zeniewski, Stanley A., 1938 Buffalo



"Junior—Stop playing with Daddy's rod and reel!"—Forth

Rd., Erie, Pa. Fishing without a license 25.00

FAYETTE COUNTY

Davis, Norman, Masontown, Pa. Fishing without a license 25.00
Kaballa, Thomas, 108 S. Main St., Masontown, Pa. Fishing in a closed stream 25.00
LaRew, James, Smock, Pa. Fishing without a license 25.00
Parks, James, R. D. No. 1, W. Brownsville, Pa. Operating a motor boat without a license 10.00
Ryan, R. A., 76 Ben Lemond St., Uniontown, Pa. Operating a motor boat without a license 10.00
Spanko, Jacob, Jr., 115 Oakland Ave., Uniontown, Pa. Operating a motor boat without a license 10.00

FRANKLIN COUNTY

Goodyear, Benjamin Mrs., No. 1, Stanley Court, Chambersburg, Pa. Fishing without a license 25.00
Rosenberry, Carl L., Fannettsburg, Pa. Operating a motor boat without a license 10.00

FULTON COUNTY

Fischer, Homer E., Amaranth, Pa. Fishing without a license 25.00
Fischer, Homer E., Amaranth, Pa. Three bass in closed season 30.00
Hollenshead, John A., Needmore, Pa. Fishing without a license 25.00
Mentzer, Donald, Needmore, Pa. Fishing without a license 25.00
Woodal, Frank, Jr., Needmore, Pa. Fishing without a license 25.00

GREENE COUNTY

Harshman, Walker, Clarksville, Pa. Exceeding creel limit 10.00
Kott, Alexander, Nemacolin, Pa. One frog in closed season 10.00

HUNTINGDON COUNTY

Arndt, Alfred, Petersburg, Pa. Fishing without a license 25.00
Buseck, George H., R. D., Alton, Pa. Fishing without a license 25.00
Bumgardner, William R., R. D. 3, Huntingdon, Pa. Fishing without a license 25.00
Cramer, William J., 213 Walnut St., Mt. Union, Pa. Violation of the rules and regulations of Spring Creek .. 20.00
Evans, Gilmore F., Wood, Pa. Five undersized trout 50.00
Pappas, James, Mt. Union, Pa. Violation of the rules and regulations of Spring Creek 20.00
Rabenstein, Harvey R., Six Mile Run, Pa. Fifteen undersized trout 150.00

INDIANA COUNTY

Boring, Edward, R. D. No. 2, Cherry Tree, Pa. Violation of the rules and regulations of Spring Creek 20.00
Durand, Clifford, Iselin, Pa. Illegal device 20.00
Henry, Jimmy G., R. D. No. 2, Rochester Mills, Pa. Violation of the rules and regulations of Spring Creek ... 20.00
Hickok, Don E., Clymer, Pa. Violation of the rules and regulations of Spring Creek 20.00
Lickenfelt, Carl W., R. D., Newflorence, Pa. Fishing without a license 25.00
Lickenfelt, Carl W., R. D., Newflorence, Pa. Illegal device 20.00
Nussen, Bernard J., Homer City, Pa. Three black bass in closed season .. 30.00
Treese, John A., Morris St., Clymer, Pa. Fishing in a closed stream .. 25.00

JEFFERSON COUNTY

Dickey, Clark, Front St., Punxsutawney, Pa. One black bass in closed season 10.00
Lesko, John, Delancey, Pa. One black bass in closed season 10.00
Stewart, Lawrence R., 429 4th St., Reynoldsville, Pa. Violations of the rules and regulations of Spring Creek 20.00
Whitman, Chester E., Summerville, Pa. Illegal device (Exploding dynamite) 100.00

JUNIATA COUNTY

Soder, Russell, McAlisterville, Pa. Fishing without a license 25.00

LACKAWANNA COUNTY

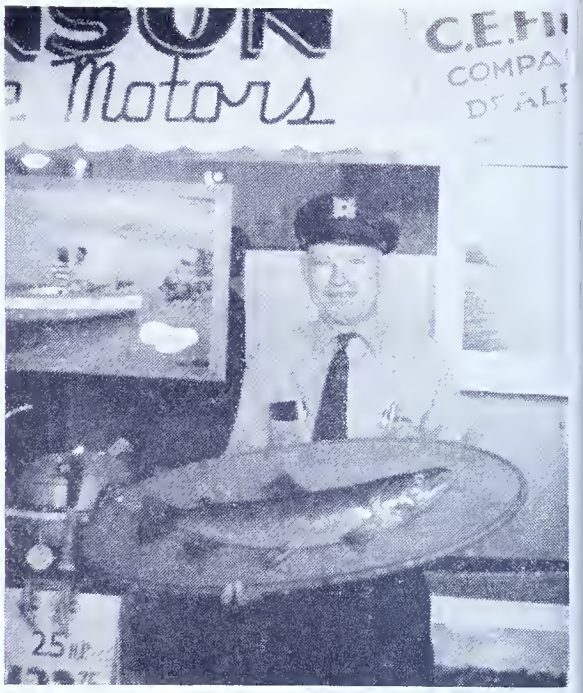
Borgia, John, 48 Clearview Ave., Scranton, Pa. One undersized pickerel 10.00
Brandes, Sidney, 1131 Linden St., Scranton, Pa. Operating a motor boat without a license 10.00
Dubesky, Stephen, 317 4th Ave., Scranton, Pa. Exceeding creel limit 30.00
Esgro, Harry, 563 Madison St., Jermyn, Pa. Fishing without a license 25.00
Guszewski, Frank, 508 S. Erving Ave., Scranton, Pa. Fishing without a license 25.00
Linderman, Theodore R., 446 Wilbur St., Scranton, Pa. One undersized bass 10.00
Loeffler, Kenneth, 1021 S. Webster Ave., Scranton, Pa. Fishing without a license 25.00
Loeffler, Kenneth, 1021 S. Webster Ave., Scranton, Pa. One pike in closed season 10.00
Lynch, George, R. D. No. 1, Jermyn, Pa. One undersized pickerel 10.00
Mancuso, Anthony S., 45 Gordon Ave., Carbondale, Pa. Six bullfrogs out of season 60.00
Meyers, Henery, 1210 Prospect Ave., Scranton, Pa. Illegal operation of motor boats 10.00
Oakley, William, R. D., Jermyn, Pa. Fishing without a license 25.00
Oakley, William, R. D., Jermyn, Pa. Exceeding creel limit 600.00
Parker, Fred, 1318 Dorthy St., Scranton, Pa. One undersized black bass 10.00
Petronis, Anthony, 1201 Monsey Ave., Scranton, Pa. Operating a motor boat without a license 10.00
Pierce, H. L., R. D. No. 1, Dalton, Pa. Six undersized pickerel 60.00
Povilitus, Anthony, 501 Mary St., Scranton, Pa. Exceeding creel limit 10.00
Rumich, Fred, 31 Froble St., Simpson, Pa. Exceeding bait fish limit .. 100.00
Schulsky, John, 2421 Cedar Ave., Scranton, Pa. One pickerel in closed season 10.00
Singer, Bernard D., R. D. No. 1, Clarks Summit, Pa. One undersized pickerel 10.00
Snow, Harry L., 26 Canaan St., Carbondale, Pa. Illegal operation of motor boat 5.00
Stanco, Vito, 156 E. Pine St., Dunmore, Pa. One bass in closed season 10.00
Waller, William, 421 Adams Ave., Scranton, Pa. One bass in closed season 10.00

LANCASTER COUNTY

Becker, Eugene Y., 370 E. Main St., Lititz, Pa. Illegal operation of motor boat 10.00
Becker, Eugene Y., 370 E. Main St., Lititz, Pa. Illegal operation of motor boat 25.00
Gahman, J. Clifford, Pequea, Pa. Illegal operation of motor boat 5.00
Lawrence, Robert J., Adamstown, Pa. Fishing in a posted stream 25.00

LAWRENCE COUNTY

Buchowski, William, R. D. 2, McClelland Ave., New Castle, Pa. Exceeding creel limit 10.00



27" 6 lb. brown trout caught in the Little Shenango River by Ralph Packard of Greenville. This fine fish is being proudly displayed by C. B. White, State Fish Warden for Lawrence and Mercer Counties. Photo was made by Dr. Joseph Frost of Pittsburgh at the Pymatuning Outboard Motor and Sport Show held in Greenville during April of this year.



Mrs. Howard Sherman of Wellsboro R. D. No. 4 and her large carp. The fish weighed 25 lbs., 10 ozs. and measured 38".

Cleaver, James, 355 North St., New Castle, Pa. Fishing without a license 25.00
Freeman, Charles, 119 N. Mill St., New Castle, Pa. Fishing without a license 25.00
Frengel, Joe, 420 Uber St., New Castle, Pa. Exceeding creel limit 20.00
Marshall, Robert, 28 Line Ave., Ellwood City, Pa. Operating a motor boat without a license 10.00
Morelli, Arthur, 422 Ubert St., New Castle, Pa. Exceeding creel limit .. 20.00
Nichols, Harold, 4 East Lutton St., New Castle, Pa. Fishing without a license 25.00
Pacelli, Carmen, 413½ Uber St., New Castle, Pa. Exceeding creel limit .. 20.00
Robinson, Mancy, 204½ S. Jefferson St., New Castle, Pa. Fishing without a license 25.00

LEBANON COUNTY

Morgan, William O., 340 S. 2nd St., Lebanon, Pa. Five undersized trout 50.00
Vracarich, George, 228 E. Weidman St., Lebanon, Pa. Illegal device 20.00

LEHIGH COUNTY

Hillegass, Henry, 250 E. South St., Allentown, Pa. Exceeding creel limit 30.00
Markel, Forest C., R. D. No. 2, Allentown, Pa. Exceeding creel limit 100.00
Rickert, Harry, 333 S. Madison St., Allentown, Pa. Four undersized bass 40.00
Uhler, Dale, Emmaus, Pa. Fishing without a license 25.00

LUZERNE COUNTY

Everett, William, Everett St., Wilkes-Barre, Pa. Interference with officers 100.00
Kassock, Andrew, Box 84, Harley Terrace, Ebervale, Pa. Two frogs in closed season 20.00
Little, George, 16 Defoe St., Pittston, Pa. Trolling from motor boat on Lake Winola 20.00
Meciejezak, Theodore, R. F. D. No. 1, Sweet Valley, Pa. Illegal device .. 20.00



Walter Spangler, of Mohrsville, Pa., and the large pike taken from Pike County waters. The pike measured 25½" long and was caught on a live minnow.

Novak, Dan J., 120 Cuba St., Kingston, Pa. One undersized pickerel .. 10.00
Novale, Phil, 325 Wilson St., Wilkes-Barre, Pa. Interference with officers 100.00
Olivia, Joseph V., 529 Vine St., Hazleton, Pa. Fishing without a license .. 25.00
Recklitis, Anthony, Jr., 765 McNair St., Hazleton, Pa. One undersized pickerel 10.00
Roberts, Walter, 40 Virginia Terrace, Forty Fort, Pa. Illegal operation of motor boat 10.00
Slovinski, Daniel M., R. F. D. No. 2, Fox Hill, Wilkes-Barre, Pa. Two undersized pickerel 20.00
Tomcho, Andrew, Sugar Loaf, Pa. Exceeding creel limit 50.00
Walters, Thomas, 110 Webster Ave., Hazleton, Pa. One undersized pickerel 10.00
White, Anthony, 212 McGinnis St., Plymouth, Pa. One tadpole in closed season 10.00
Yale, Harry, 50 Yale St., Wilkes-Barre, Pa. Interference with officers 100.00

LYCOMING COUNTY

Fladd, Lawrence H., Cogan Station, Pa. One undersized bass 10.00
Heim, Raymond, W. Edwin St., Williamsport, Pa. Violation of the rules and regulations on Youngwoman's Creek 20.00
Hessert, Edward D., 1634 W. South Ave., Williamsport, Pa. Two undersized bass 20.00
Manning, Howard, 164 East Third St., Williamsport, Pa. One undersized black bass 20.00
Ritter, Rollin O., 626 Louisa St., Williamsport, Pa. Violation of the rules and regulations of the Board of Spring Creek 20.00

McKEAN COUNTY

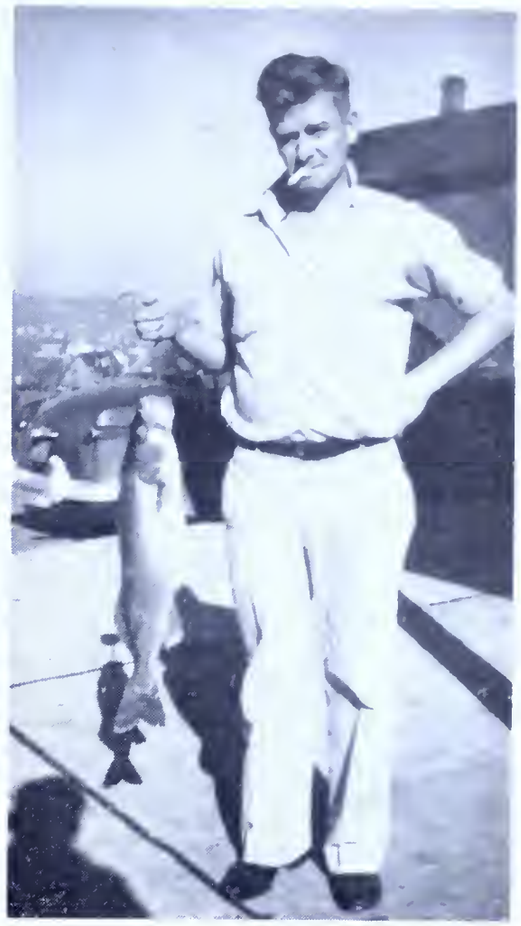
Morris, Hugh L., R. D. 1, Bradford, Pa. Fishing in a posted stream 25.00
Stock, James J., R. D. 2, Bradford, Pa. Fishing in a posted stream 25.00
Torrs, Joseph, 135 Bayard St., Kane, Pa. Illegal device 20.00

MERCER COUNTY

Fahl, John F., R. D. 3, Greenville, Pa. Illegal operation of motor boat 10.00
Kremis, Harry W., Greenville, Pa. Fishing in a posted stream 25.00
Ross, Paul E., Meherd Ave., Greenville, Pa. Illegal operation of motor boat 10.00

MONTGOMERY COUNTY

Bean, Robert, 719 Main St., Pennsburg, Pa. Exceeding creel limit 10.00
Clark, Edwin M., 407 Wynmere Rd., Wynnwood, Pa. Illegal operation of motor boat 10.00
Karsch, Theodore G., 5 Township Line, Jenkintown, Pa. Illegal operation of motor boat 10.00
McCarty, Fred, 232 W. Spruce St., Norristown, Pa. Exceeding creel limit 30.00
McNally, William, 309 Willow Rd., Oreland, Pa. Illegal operation of motor boat 10.00
Wilby, George, Schwenkeville, Pa. Exceeding creel limit 10.00



Wall-eyed Pike caught by Thomas Kapis of Washington, Pa. The fish measured 28" in length and weighed 7 lbs., 13 oz. Kapis took the prize from Number Four Dam opposite Washington.

NORTHAMPTON COUNTY

Amant, John M., 623 Itaska St., Bethlehem, Pa. Exceeding creel limit .. 10.00
Arnhaffer, Frank, 615 Montclair Ave., Bethlehem, Pa. Exceeding creel limit 50.00
Kuntz, Stewart, Walnutport, Pa. Fishing in a closed stream 25.00
Schafer, John I., R. D. No. 2, Bath, Pa. Illegal operation of motor boat 10.00
Timko, John A., 625 Itaska St., Bethlehem, Pa. Exceeding creel limit .. 10.00

NORTHUMBERLAND COUNTY

Baker, Nicholas J., 1003 N. Front St., Milton, Pa. Illegal operation of motor boat 25.00
Bowman, Lamar, 1028 W. Arch St., Shamokin, Pa. Fishing without a license 25.00
Bowman, Lamar, 1028 W. Arch St., Shamokin, Pa. Four bullfrogs in closed season 40.00
Bowman, Lamar, 1028 W. Arch St., Shamokin, Pa. Illegal device 25.00
Dewalt, Harry E., 551 S. 7th St., Shamokin, Pa. Five undersize trout .. 50.00
Donachy, Frederick E., 520 Liberty St., Watsontown, Pa. Operating a motor boat without a license 10.00
Frey, Manford E., 204 Pine St., Sunbury, Pa. Fishing without a license 25.00
Pontius, Frederick H., Island Park, Sunbury, Pa. Operating a motor boat without a license 25.00
Rummel, Francis D., 43 S. Franklin St., Shamokin, Pa. Fishing without a license 25.00
Rummel, Francis D., 43 S. Franklin St., Shamokin, Pa. Four frogs out of season 40.00

Rummel, Francis D., 43 S. Franklin St., Shamokin, Pa. Illegal device .. 25.00
Tobias, Ira S., Klingerstown, Pa. Five undersized trout 50.00
Wary, Clarence, R. D. No. 1, Shamokin, Pa. Three tadpoles in closed season 30.00
Wilson, Howard N., 306 S. Front St., Milton, Pa. Operating a motor boat without a license 10.00

PERRY COUNTY

Baker, Franklin, Jr., 13 Locust St., Duncannon, Pa. Illegal device 20.00
Mutzybaugh, John L., R. D. No. 1, Duncannon, Pa. Illegal device 20.00
Myers, Robert E., R. D. No. 1, Duncannon, Pa. Illegal device 20.00
Myers, Robert E., R. D. No. 1, Duncannon, Pa. Fishing without a license 25.00

PHILADELPHIA COUNTY

Hawkins, James, 1749 N. 9th St., Philadelphia, Pa. Fishing without a license 25.00
Hill, John E., Jr., 1922 E. Dauphin St., Philadelphia, Pa. Fishing without a license 25.00
Janczuk, Walter, 7722 Bartram Ave., Philadelphia, Pa. Fishing without a license 25.00
Kwiecien, Richard P., 823 S. 3rd St., Philadelphia, Pa. Fishing without a license 25.00
McDowell, Charles, 2718 C St., Philadelphia, Pa. Fishing without a license 25.00
Morris, Charles, 6920 Keystone St., Philadelphia, Pa. Lending a fishing license 25.00
Nawrocki, Stanley, 2038 Margaret St., Philadelphia, Pa. Fishing without a license 25.00
Novak, William S., 5302 Wayne Ave., Germantown, Philadelphia, Pa. Fishing without a license 25.00
Piech, Theodore, 3921 Priscilla St., Philadelphia, Pa. Fishing without a license 25.00
Walker, Ernest J., 907 South St., 3rd Floor, Philadelphia, Pa. Fishing without a license 25.00

PIKE COUNTY

LaRoque, Arthur N., Paupack, Pa. Illegal operation of motor boat 10.00
McKean, Henry A., Shohola, Pa. Lending fishing license 25.00

SCHUYLKILL COUNTY

Andrews, George H., c/o Mrs. Rogers, Barnesville, Pa. Operating motor boat without a license 10.00
Anspach, William, R. D. 1, Pine Grove, Pa. Interfering with an officer 100.00
Bitsko, Michael, 135 Minor St., Coaldale, Pa. Illegal device 20.00
Cicioni, Guerenous, 547 E. Center St., Shenandoah, Pa. Exceeding creel limit 10.00



DAWN AND TWILIGHT

The above photo quite clearly illustrates the interest required of all fishermen for the growing children and our title "Dawn and Twilight" we feel is quite appropriate. Photo by J. David Allen, of York, was made along Fishing Creek, York County during the past trout season and depicts Samuel Baublitz embracing little Jeffrey Kupp of Wrightsville R. D. No. 1.

Clark, Rufus J., 332 E. Mt. Vernon St., Shenandoah, Pa. Violation of the rules and regulations on Spring Creek 20.00
Cooper, Baird S., 553 E. Norwegian St., Pottsville, Pa. Exceeding creel limit 30.00
Faulls, John T. W., 108 N. George St., Pottsville, Pa. Illegal operation of motor boat 10.00
Firkal, James, 144 W. Ruddle St., Coaldale, Pa. Illegal operation of motor boat 10.00
Halabura, Michael, R. D., New Ringgold, Pa. Polluting stream 100.00
Hoffa, Harry, 117 Rowe St., Tamaqua, Pa. Line not under control 20.00
Hostler, Claire, 122 S. Second St., Frackville, Pa. Operating motor boat without a license 25.00
Jones, Artemus F., 209 Lehigh St., Tamaqua, Pa. Exceeding creel limit 10.00
Minnich, Gene, R. D. No. 1, Pine Grove, Pa. Interfering with an officer 100.00
Orsulak, Joseph 551 Union St., Tamaqua, Pa. Illegal device 20.00
Rahn, John, Box 310, R. D. 1, Pottsville, Pa. One undersized bass 10.00
Shapella, Joseph, Port Carbon, Pa. Fishing in a closed stream 25.00
Watkins, Noah, 26 E. High St., Coaldale, Pa. Illegal operation of motor boat 10.00

SNYDER COUNTY

Groce, Wilfred, 6 S. Front St., Selinsgrove, Pa. Illegal operation of motor boat 5.00
Hoover, Hall, R. D. No. 2, Selinsgrove, Pa. Operating motor boat without license, second conviction for same offense 25.00
Keller, Levon S., 7½ S. Market St., Selinsgrove, Pa. Illegal operation of motor boat 100.00
Montgomery, Robert C., Selinsgrove, Pa. Operating motor boat without a license 10.00
Shaffer, Reuben D., 602 S. Market St., Selinsgrove, Pa. Operating a motor boat without a license 10.00
Sheaffer, William A., Port Trevorton, Pa. Operating a motor boat without a license 20.00

SOMERSET COUNTY

Collins, John R., R. D. No. 3, Rockwood, Pa. Exceeding creel limit .. 10.00
Klonicke, Walter, Box 63, Central City, Pa. Illegal device 20.00
Morway, John, Sr., 503 R. R. St., Windber, Pa. Rods not under control 20.00
Tunstall, Clarence, Quecreek, Pa. Fishing without a license 25.00

SUSQUEHANNA COUNTY

Petuh, Michael, R. F. D., Thompson, Pa. Illegal device 20.00

TIOGA COUNTY

Guy, Charles D., Liberty, Pa. Two undersized bass 20.00

UNION COUNTY

Probst, Ward W., R. D. 1, Mifflintown, Pa. Illegal device 20.00
Raker, William, 700 Chestnut St., Mifflinburg, Pa. Exceeding creel limit 20.00

VENANGO COUNTY

Anderson, Don P., 612 Grant St., Franklin, Pa. Operating a motor boat without a license 10.00

WARREN COUNTY

Miles, Herman R., R. D. 1, Spring Creek, Pa. One bass in closed season 10.00

WASHINGTON COUNTY

McCovish, John, Box No. 6, Elco, Pa. Illegal operation of motor boat .. 10.00

Morich, Anthony, Jr., 99 Caster Ave., Donora, Pa. Operating a motor boat without a license 10.00

Ressler, Elmer O., 375 Third St., Washington, Pa. Fishing in a posted stream 25.00

WESTMORELAND COUNTY

Como, Raymond F., 1310 Reaves Ave., Monesson, Pa. Illegal operation of motor boat 10.00

Hoenshel, Clyde, Smithton, Pa. Exceeding creel limit 30.00

Hoenshel, Jack, Smithton, Pa. Exceeding creel limit 70.00

Lickenfelt, Hilbert D., Boliver, Pa. Failure to display license button and produce same 25.00

Lundquist, Carl, R. D. No. 4, Box 76, Latrobe, Pa. Violation of the rules and regulations of Youngwoman's Creek 20.00

Smith, George, Park, Pa. Fishing without a license 25.00

Wright, John W., Boliver, Pa. Failure to display license button 25.00

WYOMING COUNTY

Ace, Angeline, R. D. No. 2, Factoryville, Pa. Illegal device 20.00

Fronczek, Steven, R. F. D. No. 1, Tunkhannock, Pa. Four bass in closed season 40.00

Yokubines, Mrs. Catharine, R. D. No. 4, Tunkhannock, Pa. Obstructing flow of water in Millers Brook 100.00

YORK COUNTY

Cordes, Carl, Wyndham Hills, York, Pa. Illegal device 20.00

Gentzler, Harley E., 1035 W. College Ave., York, Pa. Exceeding creel limit 30.00

Knarr, R. K., 641 Lincoln St., York, Pa. Exceeding creel limit 30.00

Linebaugh, Donald, 1486 W. Popular St., York, Pa. Operating a motor boat without a license 10.00

Messerly, H. C., 411 Atlantic Ave., York, Pa. Illegal device 25.00

Mitzel, William D., R. D. 1, Manchester, Pa. Rods not under control 20.00

Rider, Mrs. Marthan, Spring Ave., Hanover, Pa. Permitting a minor to operate her motor boat in a reckless manner 5.00

Sheffer, Walter A., 608 Vander Ave., York, Pa. Exceeding creel limit ... 20.00

Wolf, Russell E., 114 E. Philadelphia St., York Pa. Exceeding creel limit 10.00

OUT OF STATE

Munos, David, 16-16th N. E. Washington, D. C.Operating motor boat with-out license plates 10.00

Tumulty, Paul, 2004 E. Keys St., Springfield, Ill. Fishing without a license 25.00

Fleming, Thomas F., 801 Motter Ave., Frederick, Md. Operating a motor boat without license 10.00

Brown, Ralph W., 3600 Royal Ave., Berkley, Michigan. Fishing without a license 25.00

Batwinas, Albert, 104 Park Ave., East Orange, N. J. Operating a motor boat without license 10.00

Batwinas, Albert J., 104 Park Ave., East Orange, N. J. Giving false information to obtain a fishing license 25.00

Benson, Howard, 51 Richwood Place, Denville, N. J. Fishing without a license 25.00

Brown, Thomas F., 32 Elmora Ave., Elizabeth, N. J. Ellegal device 20.00

Halat, Steven E., 38 Arthur St., Clifton, N. J. Fishing without a license 25.00

Puchoski, Joseph J., 70 Hayes St., Newark, N. J. Giving false information to obtain a fishing license 25.00

Sadeski, John, 311 Boulevard, Passaic, N. J. Operating motor boat without displaying license tags 10.00

Stevenson, Marvin, R. D. 2, Lambertville, N. J. Exceeding creel limit .. 30.00

Buckman, Frank, 2309 McKenna Ave., Niagara Falls, N. Y. Operating a motor boat without a license 10.00

Harris, Leonard, 121 E. 60th St., New York City, N. Y. Fishing without a license 25.00

Groll, Charles, 421 W. 48th St., New York City, N. Y. Fishing without a license 25.00

Groll, Charles, 421 W. 48th St., New York City, N. Y. Giving false information to obtain a fishing license 25.00

Thomas, William B., 615 W. 172nd St., New York, N. Y. Fishing without a license 25.00

Vanantwerp, Edward, 104 Court St., Binghamton, N. Y. Fishing without a license 25.00



"Jack" Houser and his 26½" brown trout taken on bait fish from the Little Lehigh River in Lehigh County. Holding the fish is State Game Warden Harvey Neff of Allentown. Photo—Courtesy Allentown Call-Chronicle.

Webber, David, 1420 College Ave., Bronx, N. Y. Fishing without a license 25.00
Zlobin, George, 135 Clarkson Ave., Brooklyn, N. Y. Giving false information to obtain fishing license .. 25.00
Anderson, John D., 198 Argyle Ave., Youngstown, Ohio. Operating a motor boat without a license 10.00
Barnhart, David A., New Washington, Ohio. Fishing without a license .. 25.00
Griffith, David, Warren, Ohio. Violation of the rules and regulations on Youngwomans Creek 20.00
Hale, Clarence E., 53 Murdock St., Youngstown, Ohio Exceeding creel limit 10.00
Hollar, Linwood, 424 Keeran Ave., Cuyahoga Falls, Ohio. Fishing without a license 25.00
Kissoff, Joe F., 1156 E. 63rd St., Cleveland 3, Ohio. Operating a motor boat without a license 5.00
Mascarella, Michael T., 1623 Glenwood Ave., Youngstown, Ohio. Fishing without a license 25.00
Muscatel, James, Box 82, Lowellville, Ohio. Fishing without a license .. 25.00
Powell, James, 601 E. 233rd St., Cleve- Ohio. Giving false information to obtain a fishing license 25.00
Fisher, Merle L., 225 Regent St., Hampton, Va. Fishing with a borrowed license 25.00
Fisher, Merle L., 225 Regent St., Hampton, Va. Fishing without a license 25.00
Rodger, Alexander M., 2309 Park Drive, Hampton, Va. Fishing without a license 25.00
Fitzmater, Gerald M., 202 Greinbein St., Charleston, W. Va. Fishing without a license 25.00

Old Bronze-Back

Beside an old half-sunken log,
I made a cast in the morning fog,
Using my good old Jitterbug,
And I felt a mighty vicious tug.

Old Bronze-back was very wise,
And that accounted for his size,
But he rushed at this funny wiggling thing,
And he met his match, and felt the sting.

So, plunging here and diving there,
(As my hat stood up upon my hair)
He fought his battle with every trick—
To be fooled like this just made him sick.

Breaking the water with shaking snout,
He tried to spit the darned thing out,
But after a while, the fight was won,
And I netted the big old son-of-a-gun.

I looked him over from tail to head.
"Youre a brave old fellow," was all I said
As I wet my hand and set him free,
I thought "You're a better sport than me."

I put him back to live "for seed,"
For I can catch other fish I need,
I had to admire his valiant fight,
And to let him go, was only right.

C. V. JOHNSTON

Have the spinners on your favorite plug gold plated, the fish seem to appreciate the added value.

John Crowe

in the Johnstown Tribune

The complaint made most frequently about spinning tackle concerns twisting of the line. I agree that unless you use some anti-twisting device with your spinning rig that a few minutes of casting is enough to make an awful snarl out of the thread-like line. Last year I used plenty of swivels and an anti-kinker, a lead keeled so as not to turn as it is pulled through the water. Rigging the swivels was somewhat of a nuisance.

Now help appears in bead chain swivels, leads and leaders. I've seen these bead chains used for carrying keys and so on, but until the other day I'd never seen them used for fishing gear. Instead of a length of wire or gimp a chain of beads makes up the leader. Each bead acts as a swivel. The gear is made up of monel metal, with stainless steel snaps providing for easy changes of plug, lure or whatever.

While we're on the subject of anti-kinking gear: It isn't advisable to oil swivels or similar fishing tackle designed to keep spinning free. The water provides plenty of lubrication, and oil, no matter how light, simply gets stiff and interferes with the action desired.

New Easy-Carried Fishing Outfit



Two corked transparent Tenite plastic tubes joined by a flat section of the same material form the Ashaway Fishing Kit. Equipment for a variety of both fresh—and salt-water fishing is sold with the kit. Around the middle piece is wound 30 feet of fishing line—handy and unsnarled for use. In one of the tubes are two snelled hooks and a 44-inch length of nylon leader. In the other, two split shot, one clincher sinker, and a cork float with a screw eye. Contents of the tubes are easily visible through the transparent Tenite. The kit is lightweight, small, and compact, and the tough plastic withstands dropping and careless handling without breakage. Tenite has low moisture absorption and is not affected by salt water.

Except for the cork stoppers, the kit is made all in one piece, with no hinges or cemented parts involved.

Spinning In England

Some Worthwhile Tips from Across the Sea

By E. BURTON

9 Powis Court, The Rutts, Bushey Heath, Herts, England

(Editor's Note: It may be interesting to know that Mr. Burton is the co-author of "Fisherman's Bedside Book" and that he also holds the English spinning record on pike. Mr. Burton is a very prolific writer and we are certain that our readers will enjoy his interesting dissertation.)

Since last writing to the ANGLER, it has occurred to me that your readers would like to have details of how to make a lure for spinning tackle that has proved to be a winner here.

These lures are easily made, cheap, and hooks can be changed at the waterside, (most important point) and finally—THEY DO NOT TWIST THE LINE. I have fished one of these lures all day on one of the finest French nylon lines (monoplament 12/100°) made, this line has a breaking strain of only 0.65 kilogram (a kilogram is equivalent to———2.2046 lbs.) and is as fine as a hair. After a good day's fishing in fast water the line showed no sign of twist. For making this lure one will require the following materials:

A spoon blade
A length of stiff fine wire
A spit ring and barrel swivel
A treble eyed hook
Two small wire springs

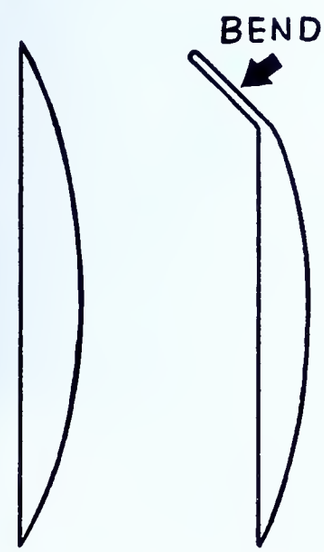
Personally I never use a spoon larger than 1½", my favorite one has a spoon of 1" only. This of course is a matter of the water to be fished and personal preference. I have found in practice that the old saying —"The larger the bait, the bigger the fish," does not prove to be correct. A small bait, *fished intelligently* will catch big fish, when large lures and plugs are ignored.

To get on with making the bait; take the small split ring and put on the swivel, then take the spoon and with a pair of pliers bend the end to an angle of 45°. Now place the spoon on the split ring. After this, take the stiff wire and bend one end into a spring loop, slip the small wire spring over the long end, hook the loop into the split ring, pinch together and slide the spring over to grip the end tight. Let the spoon lay on the wire, push on the other spring, and make another spring loop in the wire so that when the hook is placed in the loop it *swings freely just below the spoon.* This is most important.

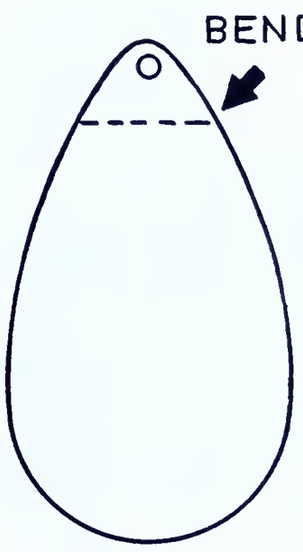
This lure has a very lively action in the water and can be retrieved very slowly and still work well. If it is desired to fish deep water a little lead wire can be wound round the wire holding the hook. Without this extra weight these lures cast about 60 to 80 feet, and sink about 3 feet per second. If, in very fast water, they work on the surface, this can be overcome by placing a small lead bullet on the leader before attaching the lure. Cast across a fairly fast stream, and fished slowly, this lure accounted for 67 lbs. of trout during a recent holiday in Wales. This is good going from English standards. Friends who have made up larger sizes tell me they are good for pike, but so far I have not used them pike fishing. I should be glad to hear of results should any of the readers of the PENNSYLVANIA ANGLER care to try out this lure. It is essentially designed for threadline however.



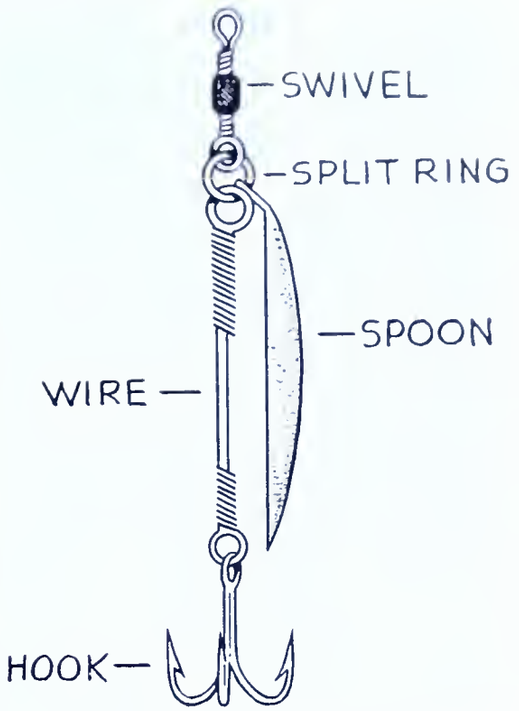




SIDE VIEW



FRONT VIEW



George W. Forrest

in the York Gazette and Daily

During the past several years there have been increasing violations recorded against anglers who run afoul of the Fish code with regard to the taking and possession of minnows for bait fish. Increased fishing pressure has taken a heavy toll of the minnows in our small feeder streams. You have only to try to get bait in your favorite run these days to acknowledge the truth of this situation.

Some years ago an angler could make a couple of swipes with his net and have enough fat minnows to start off on a fishing trip. Today you work and work hard to secure your allowed 35 and you'd better count 'em and recount 'em because any over 35 cost you plenty in fines. In hot weather there are many times you have trouble keeping minnows alive. I've seen fellows jam a bucket of bait into the trunk of the car, drive 30 or 40 miles to a fishing spot and wondered why their bait died on the way. When this happens, there's nothing to do but start all over again. This means that 70 minnows have been cleaned out of our streams which doesn't conserve our dwindling supply at all.

There are many schemes and devices used by anglers to keep minnows fresh and lively. Water temperature is important. I've observed anglers taking minnows from the cold water of a spring run in the bucket and plunk them direct into the warm water of the river . . . that was all for the minnows! The other day I saw a new outfit on the market which looks like a regular floating minnow pail with an aerator attached operated with a "hot shot" dry battery from your boat, your car battery or a small dry cell unit attached. The rubber hose connection leads into the bucket and virtually throws oxygen into the water with a constant stream of air. The entire outfit is light, easy to handle and appears to be an excellent method of conserving our bait fish.

STREAM-SIDE LIFE

Sphagnum Moss

By ROBERT LEO SMITH

Some mosses are familiar to all of us, but only those who penetrate the boggy areas surrounding a pond or lake and the marshy lowlands about some streams will find the sphagnum moss.

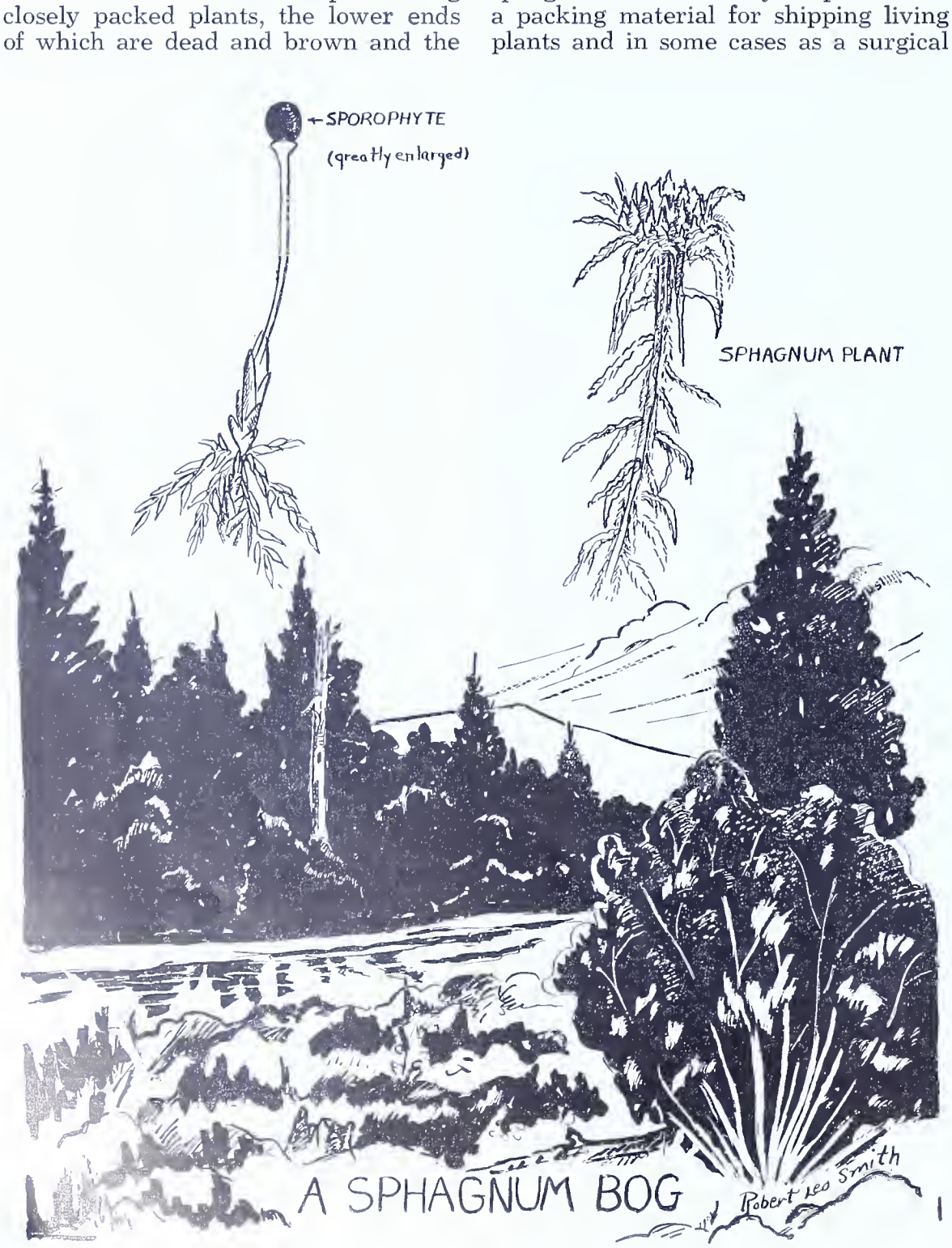
The bog or peat moss belongs to the order Sphagnales and contains only the one genus *Sphagnum,* which is represented by several hundred species growing the world over. Its favorite habitat is an old pond or lake that is gradually filling up. Here sphagnum grows in large cushion-like mats that yield quickly when stepped upon. These mats are made up of long closely packed plants, the lower ends of which are dead and brown and the upper parts branching and leafy.

There are two kinds of branches on the sphagnum plant. Clustered about the top of the plant to form a sort of a rosette are the short, erect branches, and falling gracefully about the stems are the long pendent ones.

The leafy structures of the sphagnum have two kinds of cells, narrow ones which contain green coloring matter and large translucent ones with conspicuous thickenings and openings. These latter cells have the ability to absorb and hold a considerable amount of water. This characteristic makes sphagnum economically important as a packing material for shipping living plants and in some cases as a surgical dressing. Carbonized sphagnum becomes peat and is used for fuel in some regions and for a garden mulch.

The male reproductive structures of sphagnum are spherical bodies borne on long stalks which grow out of the axils of the leaves of the short, erect branches. The female structures grow on the ends of the short branches. These produce the sporophyte, a small spherical capsule, dark brown or black in color, borne on a short stalk which also arises from the ends of the short branches. Upon germination, the mature spores from the sporophyte develop short filaments that eventually grow into the familiar sphagnum plants.

A sphagnum bog is an interesting place for the acid conditions existing there eliminate many plants and bring together unusual forms. Along the edges of the bog grow hemlocks, and, if far enough north, the balsam fir. Highbush blueberries are abundant; and scattered through the sphagnum are those predacious plants, the sundew and the pitcher-plant.



Ralph Sides

in the Lancaster New Era

It's funny what fishing rods do to people.

When a guy holds one, the world changes; everything about him is wonderful!

If he is a Big Shot—he may become chummy with a bum, they are pals. Exchange the rod for a golf club or gun and he might kick the hobo out of his way. When God made all men equal, He must have been thinking of fishermen. There is hardly any other phase of a man's life which levels everybody.

Pick out a person who is bored stiff with fishing and eight chances out of a cat-o-nine-tail you'll have someone who can't live with himself.

The pace of the world today fits us for holding lightning rods rather than the pacifying fishing rod.

Presidents go in for fishing, a fishing rod is a let down from a ruling staff. We all can't be presidents, but anyone who wishes can find solace in fishing.

When a man learns to hold a fishing rod patiently waiting for fish to bite, he learns something of himself too.

Many are strangers to themselves, we might grimace looking in the mirror in the morning while shaving but except for a slight extraneous criticism, we go about smugly thinking all is well.

A character analysis is forthcoming to anyone who will go fishing—you'll have an opportunity to "size up" yourself with a "measuring rod" used for fishing.

You can ponder on which is smarter, fish or man? It might bring your ego down a peg—but you'll keep trying to prove, just as we all do, that your brain is not only bigger in size than a fish's but that you can use it to better advantage . . . but you may be tramping on your beard by that time!

Westmoreland County Junior Conservation School

1. *Purpose:* The purpose of the school is:
   a. To provide a course in conservation of our resources as they pertain to wildlife, especially those species normally found in the Southwest part of the state.
   b. To enable those who attend the classes to, upon completion of a course, organize and assist in the training of a similar group from their own vicinity and sponsored by their parent club.
2. *Attendance:* One (1) representative from each club in the county. Such club *need not* be affiliated with the County Federation of Sportsmen's Clubs.
3. *Age Limit:* Each person attending shall be between the age of 16 and 21 years.
4. *Duration:* The school will commence on or about July 1, 1949, and with the exception of the months of October, November and December will extend through April 30, 1950.
5. *Date, Time and Place:* To be announced on printed schedules which will be furnished each student and the secretary of each club concerned. It is planned that classes will be conducted each Saturday from 1:00 to 5:00 P.M. The place is as yet undecided, but it is hoped that two or more clubs in the county will offer their grounds for the classes. Such clubs as Latrobe, Murrysville, Mt. Pleasant and West Newton would be ideal, as they offer a building to be used in case of bad weather.
6. *Instructors:* It is intended that the District Game Protectors, their Deputies, the Fish Warden and qualified sportsmen will conduct the class.
7. *Equipment:* Each student will be required to furnish a fountain pen. In order that each student may keep a uniform record of the instruction, such equipment as notebooks and paper will be furnished by the Game Commission.
8. *Scope of the School:* Following is a list of the subjects to be covered: Orientation; tree identification and its uses as food and cover; food plots for food and cover; organization of the Game Commission; the sportsmen's part in conservation; fire fighting teams; fox trapping; weasel trapping; pole traps; rabbit trapping; rabbit driving; crow hunting; identification of hawks; marksmanship; the Farm-Game program; game shelters; game feeding stations; winter game feeding; game birds and animal habits and requirements; Game Laws and the reasons for same; soil conservation and game management; dog problems; use of license monies; first aid and snake bites; tree planting; bird house contest; poster contest; story contest; photography contest; quizzes on outdoor subjects; organization of Junior sportsmen's clubs; program for junior sportsmen's clubs; taxidermy visit; and Fish Laws.
   These subjects will be taken up as near as possible to the time of the year they are most suitable. In addition other subjects, should they arise, will be covered.
9. *Sponsoring Club:* While it is hoped that the County Federation will support this program there are some responsibilities for each club sending a student.
   They are:
   a. Furnish full cooperation with the school; and with the student during his attendance, and later when a junior organization is being organized.
   b. Insure that the student arrives at the proper time and place for each class.
   c. Realize that the school has something to offer and insist upon the student being attentive during the classes. The instructors will do their best to make the classes interesting and instructive, and will insist that the student give his full cooperation.
10. *Conduct of the School:* The classes will consist of instruction; practical work; recreation; shooting and contests. It is contemplated that each club will submit prizes (probably two or three) to be given to the winners of the various contests. It is estimated that the cost of the school will be about ten dollars for each student for the entire eight months. Such fund would be paid by each student at the initial class and would be fully accounted for at the end of the course. This fee would be provided by the club sponsoring the student.
11. *Miscellaneous:*
    a. Uses of the fund: Ammunition, shoulder patches, diplomas, clay birds, materials for contests and printing.
    b. Transportation; Should this program be put into effect, several students from the same vicinity could arrange to ride together.
    c. Visitors: It is hoped that any member of a senior club who desires to visit any of the classes will feel welcome to do so. However, it is to be remembered that they attend as visitors only and therefore no effort will be made to include them in any of the activities.
    d. Clubs should use care in selecting the person to attend the school, as it will not be feasible to change students once the course has begun.
    e. Any suggestions on this program will be greatly appreciated and should there be any, they should be submitted as soon as possible. Should this program be approved, it should likewise be done as soon as possible in order that the many necessary plans can be made to get it under way.

SAM HENDERSON, Fish Warden
JACK LOGAN, DGP G-7
CARL JARRETT, DGP G-13



Clyde Hawk, of near Sharpsville, and the fine 24" brown trout he caught in Pardoe Run, Mercer County. The fish weighing 5⅜ lbs. is classed among the better catches of that northwestern county.



George Lanning, of New Wilmington, Pa., and three brownies he took from Pine Run, the largest of which weighed 4½ lbs.



John Hochgertel, age 4, of Pottsville, and grandson of A. J. Lech, Fish Warden of Schuylkill County, proudly displays 5 fine rainbow trout which his grandfather says he caught himself. Congratulations Johnny!

Pelicans often unite to drive fish into shallow water where they can be caught more easily.

Lakes of North-East Pennsylvania

By Joseph A. Yanchik

"The Big Drink"

Wallenpaupack has been my summer vacation spot for the past twenty-two years. I have fished it in every cove and have had some mighty good fishing. As I look back over these many years I must confess that the big lake still possesses some mighty big fish even though it is fished as heavily as any lake in our grand Commonwealth. Brown trout, bass, pike, pickerel, calico bass, rock bass, sunfish, perch and catfish together with the carp make this wide expanse of water their home. The variety certainly has produced some excellent fishing and the Big Drink is still the mecca for thousands of fishermen.

I was present at the big lake when it was first opened to fishing and I cannot forget the fine pickerel which we caught from the shore on spoons, plugs and just the ordinary angle worm. Of course such fishing cannot continue forever and it has slowed up since then. There were no boats on the lake on the opening day except those used by the wardens and the shores of this gigantic lake were lined with anglers from all parts of the state. Lake Wallenpaupack has an estimated circumference of 57 miles. Situated in Wayne County, high atop the grandiose Poconos, glimpses of its limpid blueness can be discerned from the highways. But as soon as you come to its rugged shore line the view of its wide expanse of water is breath taking. It is a man made lake which covers untold acres of farm land, deep valleys and trees; some stumps which still can be seen in water that varies in depth depending upon the pumps which carry the water to the generating plants of the Penn Power and Light Company, located nearby.

In the spring this lake is fed by many creeks which disgorge the melted snow into the parent body. At this time the lake becomes extremely high and its waters back into the woodlands surrounding it. In the late summer and fall the opposite is true and the lake reaches a very low level, especially if the rainfall is light. Near the Wilson Dam buoys are strung across a section not far away from the giant ramp. Past these buoys you cannot fish. I have looked into the deep water near the retaining wall of the Wilson Dam and I have seen fish as long as some caught in Canada swimming lazily near the screens lined against the giant pipe-line which extends under the highway, nearby. This section of the lake is extremely deep and produced very good pike until it was closed off for propagation purposes and during the recent war, for security reasons.

This lake is a well known summer resort and is catering to vacationists from as far off as Florida. Many thousands of people from New York and Jersey come here year after year. Cottages are springing up all around and lots are expensive even though located at great distances from the lake. From early in June until bass seasons end in November hundreds of campers stay in their tents unmindful of the cold nights as the season, wears away. Of course these campers have their luxuries such as electric lights and running water. Many trailers are also parked in the fields surrounding the lake. At night the strumming of guitars at the public camping places fills the air with harmony while here and there huge bon fires cast their red glow against the trees. Here and there the "put put" of a motor boat is heard as it plows through the still waters. Many lights blink from the boats of fishermen who fish this lake far into the night. Some of the outstanding places to visit at this lake are The White Beauty View and the Tafton House near the Wilson Dam. Then, of course, there is the Public Camping spot at Wilsonville and Seeley's Landing. There are numerous landings where parking and tenting is permitted. There is one unforgettable feature about Lake Wallenpaupack and that is the beauty of its sunsets. Artists looking for inspiration need not go further than the Big Drink. It has fish, facilities for swimming and boating and its scenic wonders are beyond comparison. Truly, this lake's magnificence is unparalleled

I have had some surprises on this lake. I never believed the story that a fish would leap into your boat unexpectedly until one night when fly fishing I was floating quietly in a shallow cove filled with weeds and stumps when a huge pickerel leaped into my boat and hit my ankle with a thud. I still have the marks to show from that impact. Now I believe a fisherman when he tells me that a fish jumped into his boat. And I recall the day when I heard a splash near a stump and upon investigation found a large pickerel with a pretty large perch in its jaws stuck under the root of the stump. It was unable to back out of its predicament on account of its dorsal fin and I collected both fish very easily. Or the time when I observed a mother duck and her little brood near a stump teaching her young ideas on how to dive and how the little ones swam atop her back like planes on a flat top. As usual my camera was not with me and I lost another of nature's tin types. I also recall the day when an otter showed me how poor a fisherman I was. This, sleek, black fellow would slide from a short stump into the water and would crawl back with a perch in his mouth which he gobbled up bones and all. That was the only otter I have ever seen at the big lake and he had a fishing technique of his own. These are the pleasantries I have experienced here by the Big Drink is very treacherous during a storm. Take it from me, Mr. Angler, whenever you see cumulus-stratus clouds on the horizon of the lake, pull up your anchor and scram for shore. This lake becomes a raging, white-capped monster whose waves will upset your boat or pound it to pieces against the rocks on the shore. Last summer this writer's row boat was unceremoniously tossed upon a slanting rock and before I could get it off of its precarious perch I and my equipment was baled out into about five foot of water. I was lucky that I was near the shore. Danger lurks in the big waves on the Big Drink.

The only complaint that I have heard about Wallenpaupack is that there are numerous carp in its murky depth. To that I can subscribe as I have seen these big fellows scooping up various food along the shore lines. However, if you should hook one of these babies you better know how to handle a fly-rod and make sure that your line and leader are in good condition. Since fresh water carp are good eating maybe this will make for good sport in the future.

The surrounding mountains frame the lake with a color of fresh green in the summer and myriad colors in the fall. You will like Lake Wallenpaupack, not only for its recreational facilities such as steamer rides and its excellent fishing but also for its high altitude where health abounds. Give it a try sometime and you will thank the Pennsylvania Fish Commissioner for one of the best fishermen's paradises in Pennsylvania. The roads surrounding it are in excellent condition and you can't go wrong when you go to Wallenpaupack.

Cummings Pond

This is a small lake not far from Orange, Penna. It is state stocked and is gradually making a come back. It covers about twenty five acres of land and its average depth isn't over ten feet in its deepest part. This is a very muddy lake as you will note when you try to lift your anchor. Black and gooey it sticks to you like clay. On the left of Fanti's boat site are many stretches of lily pads which extend around that part of the lake and grow thicker toward the right shore line of the lake. Some beautiful bass and pickerel have been lifted out of these pads. Catfish, sunfish and perch run much smaller. Carp, also, inhabit the water and they are fine sport on a fly rod and light line.

This lake's ownership is being claimed by two families although the lake is not divided by means of floating logs as is the case of Perrin's Marsh which is described in another article. Boats can be rented from both parties at a dollar for the day. There is no limit as to the number who use the boat for the buck. The deepest part of the lake is to the right of Fanti's landing. There I have seen some fine bass taken on plugs. This is a grand place to take the kids. There is a covered fire place for cooking, picnic benches and fine groves of trees. I consider it a good spot for a lot of summer fun and pretty moderate fishing. Being close to many towns it is fished intensely and extensively. From the time the ice melts on it until the snow flies again, Cummings is a busy pond. This pond is dirty most of the time on account of its muddy bottom. I have seen catfish caught here that had a distinctive yellow color, particularly around the belly. This, I presume, is due to the yellow lily pads which seem to excrete the yellow color that I have noticed on the lake. The sunfish are whitish in color and are small. However, if you want the Missus or Junior to get a lot of action then take them to this fine pond.

PLAN

For

"PENNSYLVANIA WEEK"

OCTOBER 17-24, 1949

"TRENCHARD" SAID IT—

"MENS SANA IN CONTEMPORE SANO"

(A Sound Mind in a Sound Body)

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A GOOD

SLOGAN

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"PENNSYLVANIA WEEK"

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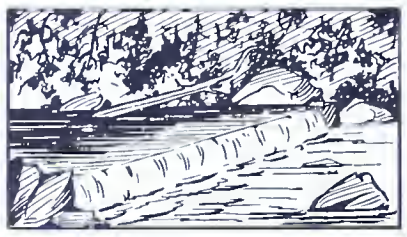
OCTOBER 17-24

1949

According to the Law...

Motor driven boats on lakes, ponds or dams within the State Forests are prohibited under State Forest Rule No. 13.





The Penalty for seining minnows within 100 feet from the breast of any dam or fishway is $100.00.

To sell bait-fish or fish-bait a permit is required, but you may not take bait from waters within the Commonwealth for the purpose of sale at any time, with or without a permit.





Never borrow or lend a fishing license. Both are subject to the same penalty.

Time limit for possessing game fish is 6 days after the close of the season. $10.00 for each fish living or dead.



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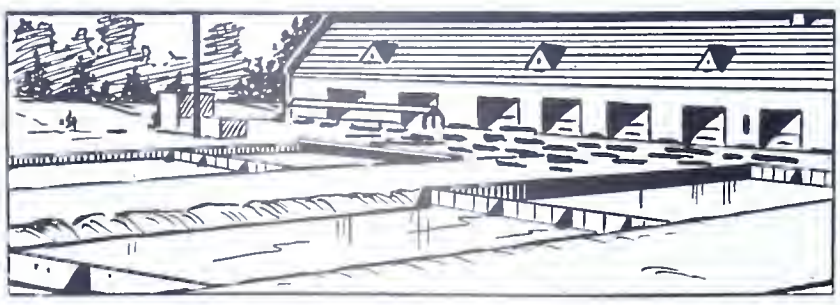
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COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA
FISH COMMISSION
HARRISBURG, PA.



The Angler

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Sailboating on the Susquehanna River at Lake Clark near York. A look at the famous Lancaster County farm land in the background.

CLEAN STREAMS

To make the public conscious of the necessity for CLEAN STREAMS and to win public support for the vigorous anti-pollution campaign now being carried out in Pennsylvania, is vital if complete success is to be attained in this effort. It is important that everyone, insofar as possible, be made to fully appreciate that CLEAN STREAMS are the backbone of bringing advancement to the general welfare and assurance against sliding backward—CLEAN STREAMS are a safeguard against hazards to public water supplies—CLEAN STREAMS are necessary for economic growth since industry is dependent upon good water for its operation—CLEAN STREAMS provide recreation which is necessary for everyone and which today, in itself, provides business amounting to six hundred million dollars annually in Pennsylvania. In the drive to bring back CLEAN STREAMS it is most desirable that information relating to this subject be as wisely distributed as possible.

Old-time alchemists sought the "elixir of life," the magic substance that meant eternal youth and unlimited wealth.

Good clean water in our streams is a very real and practical "elixir of life"—no human being, plant or animal can survive long without it. Moreover, it really exists and is wealth in the sense of being a "material object which has economic utility."

Water does not give eternal youth—but clean water guards our health, and clean streams promote recreation and well-being. Water does not change other elements to gold but it helps produce things that we need far more than gold.

PENNSYLVANIA'S WATER-WEALTH

Yes, water is wealth—usable wealth. Pennsylvania has a generous share of these "liquid assets" which nature invests for us so wisely in our farms, homes and industries. We cannot place a monetary value on the 41 inches of rain that falls upon Pennsylvania each year. But it is not difficult to realize its value.

Suppose, for instance, the Keystone State had to secure its daily supply of water as it obtains its other natural resources. At our present rate of demand we would have to mine, or pump, from the deep earth, 50 to 100 gallons of water every day for every Pennsylvanian. That's the per capita usage for our homes, industries and municipal services combined. It would mean about two and one-half million tons of water—600 million gallons—to be produced each day. That's one of the dividends we draw from Nature's "bank"—the water that replenishes our rivers, lakes, streams, and underground water supply.

Nature does take care of the investments . . . but guarding that investment—seeing that our water-wealth is not wasted—is our task. The wasteful enemy is pollution, which renders water temporarily useless, or even harmful to our other sources of wealth.

NATURE MAKES INVESTMENTS

Clean water is needed, in vast quantities, in the production of every human commodity. It shares in the work on the more than 15 million acres of Pennsylvania's 171,761 farms. By its aid, seed and soil are transformed into the foods we eat, the field of grain, the orchards. The farmer might plant his corn in the most fertile soil but there would be no corn unless nature was prepared to supply 72,000 gallons of water to every acre.

A lavish supply of water—clean water—must go into Pennsylvania's 19,100 industrial plants to keep a million and three-quarters workers busy turning out each year products valued at about 14 billion dollars. Water—clean water—pouring over gigantic dams, or converted into steam and whipping through steam turbines, gives the power that moves the wheels of this mighty industrial empire.

And clean water must go into the many processings which convert raw materials into usable food, clothing and other commodities. The steel plant needs 65,000 gallons of water to produce a ton of steel. Seven to ten gallons are needed to produce a gallon of gasoline, 650 gallons to process 100 pounds of hide in making leather.

Pennsylvania's seventh-largest industry—amounting to 650 million dollars annually recreational travel and vacationing—is dependent on the clean streams which attract tourists, vacationists, fishermen—and nourish the wildlife which draws hunters into our great recreational areas.

Nature is ready and able to meet these and the thousands of other de-

(*Turn to Page* 19)

Eels Are Queer

By N. R. CASILLO

In the eerie light of a flickering fire a man hooded with what looked like a pillow case, removed a protesting foot-long eel from the hook of a crude pole and line outfit which he manned and passed the wriggling creature to me. "There you are pal. You've been told what to do with it. Now go to it." The eyes back of the grotesque slits gleamed maliciously.

Then, while twelve other masked figures armed with expectantly poised paddles looked on, I grasped the slithery thing as well as I could as close to the head as possible and lifted it to my mouth. With bared teeth and closed eyes I bit into the thin neck until I heard the bones crunch and felt a convulsive shudder pass through the reptilian body. Then, I threw its writhing length to the ground.

In the course of a quarter of an hour I repeated the ritual, for that is what it was, a total of seven times. Fortunately for me, the longest of the victims couldn't have been more than fifteen inches. The distasteful performance, it may be added, was part of the initiatory ceremonies necessary to become a member in good standing in the college order of *Ye gods and little fishes.*

My thoughts often revert to this atavistic phase of the initiation because it was responsible for my observing one of the truly remarkable exploits attributed to the common eel.

On that memorable night the ceremonies were conducted on the wooded shores of a secluded pond, a pond literally crawling with eels. Shortly after midnight when the rituals were concluded, the four initiates, of which I was one, were compelled to find their own way back to town as best they could.

Since we were freshmen and unacquainted with the spot to which we had been led afoot and blindfolded, our best bet was to follow the stream which we heard flowing below the high embankment skirting the pond at that point. We knew that it passed under the road a mile or so out of town before winding its interminable way through the tidal flats skirting Great Bay. We slowly felt our way down to the stream's edge.

The nightmarish trip through dew drenched bushes, weeds and other lush growths was reminiscent of Burmese jungles in the rainy season. When a wan dawn made things a bit more discernible we found ourselves at the edge of a fairly large field. The stream we had followed gurgled at our right, and at the edge of the field it disappeared under a huge pile of drift obstructing a considerable length of its bed.

While we were still some distance from the drift one of my companions suddenly g r a b b e d my arm and pointed dead ahead. "Look!" he tensely whispered.

Indeed, we all looked, and at one of the strangest sights that I have ever beheld. S o m e t h i n g moving through the grass imparted a queer wavelike motion to the otherwise still blades, the resulting thin line describing a rough semicircle with its ends terminating at the water's edge above and below the pile of driftwood. Obviously, whatever it was was detouring around the obstruction. We edged cautiously forward so as to possibly discern the cause of the phenomenon.

A splash at the water's edge near the upstream terminus of the mysterious line caused us to turn in its direction. Emerging from the water we saw what we believed to be a snake. Almost immediately it was followed by another. After a third made its appearance it suddenly dawned on us that we were observing the overland journey which eels are said to embark upon when they encounter an obstruction in their aquatic pathway. In a few minutes we saw more than a dozen of the silvery creatures ranging in length from two to more than three feet, travel the slimy trail made by those preceding them. They slid through the alien element as effortlessly as they glide through water.

Eels are most certainly queer, yet, they are fish. Yes, despite their elongated bodies common eels are classed as true fishes just as are trout, bass, catfish and most of the other desirable food fishes. They are not to be confused with other fresh-water species such as the creek lamprey eel and its lake dwelling cousin; these relics of a bygone age being but two of a group comprising the connecting link between that ancient assemblage of fishes having a cartilaginous (gristle) spine, more properly called a notochord, and the modern bony fishes. Lamprey eels have sucker-like mouths backed up by formidable circular rows of sharp teeth with which they lacerate the bodies of their victims while tenaciously clinging to them preparatory to sucking out their life blood. True eels have mouths and teeth similar to those possessed by the better known fishes.

Many streams in our Commonwealth are inhabited by creek lamprey eels. Here in Lawrence county they are found in Neshannock Creek. Many fishermen who have seen them erroneously consider them immature forms of the common eel. As a matter of fact, the relationship is as far apart as the poles. Neither should the common eel be confused with the conger, the moray and other giant marine species.

Unlike salmon, shad and other anadromous fishes i.e., those that ascend streams to spawn, eels are catadromous and therefore descend streams to return to their oceanic spawning grounds. The American eel and its European relative spawn in the Sargasso Sea, the former southwest of Bermuda, the latter southeast of that British island; the breeding areas of both frequently overlapping.



Its very uncertainty makes still-fishing the fascinating sport that it is. When a big eel takes hold excitement is assured.

The eggs are laid in mud banks at depths ranging from 600 to 1,000 feet. They are extremely prolific and a single large female will lay more than 10,000,000 eggs. That's right, ten-million. Like most of the salmon, eels spawn but once and then die. Sometimes a female becomes landlocked and is compelled to complete its considerable life span in a pond. Landlocked eels often grow to an enormous size. However, the maximum weight of an adult ready for spawning seldom exceeds four pounds. Obviously, landlocked eels never spawn.

Until as late as 1921 virtually nothing was known of the eel's early life history. Some were said to spawn in the ocean and others in fresh water. Young eels up to three or four inches in length, called elvers, have always been known. In the spring these small

eels ascend streams by the millions, slowly working their way upward until they can go no further. However, the stages of growth between the egg and the elver were cloaked in mystery. It was discovered that baby eels under three inches in length are most uneellike, being thin flattened creatures, so transparent as to easily permit the reading of print through their bodies. Before it was known that these delicate forms were larvel (undeveloped) eels, they were called *Leptocephalus* and occurred literally by the billions floating on the surface of the Atlantic in the vicinity of their spawning grounds.

Eventually, it was discovered that these transparent creatures were baby eels and that they assumed the adult form at the end of a year when they had attained a length of three inches. By the time the American eels are a year old they begin to appear in streams all the way from the St. Lawrence River to the Gulf of Mexico. The European species, on the other hand, remain three years in the undeveloped form before they appear as elvers in the streams of their home continent. This longer period of development coincides with the corresponding longer distance that the latter must travel.

The males of the common eel are not only smaller and encountered less frequently than the females, but they never ascend streams, remaining in tidal and coastal waters until they seek their spawning grounds at sexual maturity. Accordingly, those taken in inland fresh waters are all females. Indeed, the millions annually seined, trapped or otherwise caught on their migration journeys are nearly all of the weaker sex.

In Lawrence county there are individuals who have taken eels both in the Shenango and Mahoning rivers, and it can be assumed that they like all the eels west of the Alleghenies got there either via the Mississippi River or by way of the Great Lakes. Since Lake Ontario has free access to the sea eels are found there in large numbers. Prior to the construction of the Welland Canal connecting lakes Ontario and Erie, the few eels occasionally observed in the Great Lakes probably worked their way in via the Mississippi or more unlikely, by way of the Erie Canal. The great falls of the Niagara River present an impassable barrier to those multitudes that churn the seething whirlpools below the falls on their annual trek upstream. It is indeed the end of the line for them. Reliable estimates of eels seen on a single trip behind Niagara's curtain runs up into the hundreds of truck-loads. This, of course, is during the height of the migration season.

Newspaper accounts of the former good catches of eels made in western Pennsylvania waters causes one to wonder why they are now so rarely if ever encountered. Their scarcity may be attributed to (1) the great number of insurmountable barriers such as the huge dams which have been erected at many points on the Ohio River and its tributaries; (2) pollution. This evil has so reduced their food supply as to make it difficult for them to exist; the eel being voracious to an extreme.

Mentioning the eel's voraciousness brings to mind a popular method of catching them. Bobbing for eels is done by stringing a small gob of worms on a line. When once seized, the bait is rarely released by the chronically famished creature. It is thus pulled from its element and shaken off into a basket or other receptacle.

On an after dark fishing jaunt some years ago a four-foot eel taken on a hook and line gave a companion and I an exciting fifteen minutes. We were fishing for bullheads from a boat when a tug many times more powerful than any I had previously experienced suddenly electrified me into action. My light outfit weathered the terrific onslaughts of the mysterious fish and we finally succeeded in dragging it into the boat. Before we could get a light on it the thing promptly went to town, smashing its way from one end of our craft to the other.

When a flashlight disclosed its identity, my companion nearly jumped into the pitch-black water. As it was, he climbed on to a seat and stood there transfixed while I battled the creature. The most convenient weapon was a handax which I swung freely but not too accurately. The boat and its contents were reduced to a shambles before we succeeded in getting the sinewy as well as exceedingly slimy fish into the confines of a burlap sack.

An eel not over two-feet long is delicious food when fried to a turn. Even the larger ones are good if not too fat and therefore excessively oily. And the dash of excitement which they impart to a nocturnal foray after bullheads, catfish or carp makes an otherwise contemplative pastime a memorable standout.



Any stream east of the Rockies having access to the Atlantic Ocean may contain eels. An eel was taken from this hole in Neshannock Creek back in 1933.

Fishermen Are Nation's Top Spending Sportsmen

Fishermen spend more for equipment than any other group of sportsmen. That's no fish story either.

The U. S. Census Bureau reported in its 1947 census of manufacturers that the factory value of fishing tackle sold to fishermen amounted to nearly $58,700,000.

The bureau said this is more than one-fourth of the $210,000,000 worth of sporting and athletic goods of all kinds turned out.

In comparison, the 28,884,000 golf balls produced had a factory value of $14,300,000. Iron golf clubs totaled 2,700,000 costing $10,000,000; wooden golf clubs, 1,140,000 costing $6,000,000.

These are some of the other totals: tennis balls 8,052,000; baseballs 7,848,000; softballs 4,860,000; basketballs 1,080,000; footballs 3,696,000; baseball bats 3,332,000; baseball gloves 2,184,000; billiard and pool tables and accessories costing $5,300,000; roller skate production $10,000,000.

Try Trolling for Wall-Eyes

By DON SHINER

Most anglers confine their angling time in the pursuit of the game fish, such as, trout, pickerel and bass. As a result, little is heard about pike-perch or walleyes in comparison. Among many anglers, it is a moat question whether the walleye can even be considered a game fish. However, it makes little difference since these pike-perch offer variety in this game of angling and often some fairly large lunkers or specimens are taken and unquestionably are one of the most tastiest of all our fresh water fish.

They are not inclined to take our artificial lures as readily as live bait, but will take some plugs and spoons if presented at the right place.

Numerous anglers have caught a few or none in the course of their fishing adventures. This is due to the fact that not much action can be expected from these fish during the day light hours, unless the day is dark and cloudy. They are nocturnal in habit, prefer the deep dark pools and hug the rocky or sandy bottom.

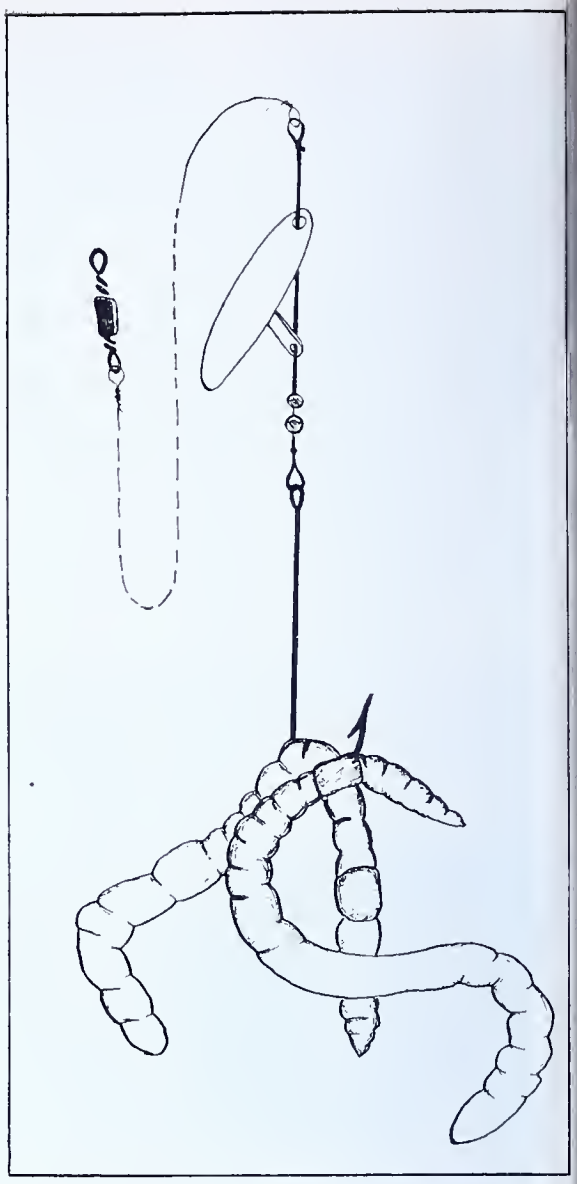
I recall one of my first experiences with this fish which took place on the Susquehanna River. We had made preparations for trolling, using June Bug, and Susquehanna spinners with a gob of "night crawlers" trailing behind. The night was exceptionally dark and the boat had to be moved slowly so that a straight course could be kept. This friend, Charley, knew the river well, and guided us over the deepest holes in the vicinity.

I had let out the spinner and could feel every few seconds the lead sinker striking the bottom. We had only gone a short ways when my rod was almost jerked from my hands. At first I thought the lure had snagged fast to some debris on the bottom, but soon felt a tugging movement. Undoubtedly it was a walleye, and it seemed to have extreme power in its tugs, something quite different from anything I had experienced before from trolling for bass, pickerel, and lake trout.

The fish soon seemed to be willing to surrender and Charley brought the lantern to the side of the boat so that I could see to net him.

"No wonder they are called 'wall-eyes'," I remarked, as I saw the huge luminous eyes shining.

It was a fair specimen weighing perhaps four pounds. These fish have been known to grow as large as 12 to 14 pounds and some larger, however, around three to six pounds are average.



The Susquehanna Spinner or June Bug, with a gob of worms attached to the hook is a "top-rate" wall-eye lure.



The Susquehanna River at Tunkhannock, Pa., ideal wall-eye grounds.

That night produced eight wall-eyes, and it was an exciting adventure and memorable one. The success of that night and of any night depends on numerous factors.

One is, when trolling, the bait or artificial lure must be down close to the bottom. This can quickly be done by tying a thin line (which is not too strong) a few feet above the lure. To this, a lead weight or sinker can be attached. The trolling speed should be slow so that the sinker is dragged over the bottom. In case the sinker becomes fouled between rocks or other under water debris, the short piece of line of a lighter weight and test will break before the line attached to the lure. A small handful of sinkers is often used up on one trip, but losing these and not the lure is far less expensive.

Wall-eyes hug the bottom and the bait or lure must be presented to them there. However, they are members of the perch family instead of the pike and pickerel clan as commonly believed and have many of the perch



Angling for wall-eyes during day light generally is not too successful. Instead take time out until the sun begins to set, then, try trolling slowly over the gravel bars. Be prepared for some fast action!

amily habits. As all perch, they are nclined to move or roam in schools, nd as in the case of feeding on a chool of minnows, move or follow the ninnow food even to shallow water at imes. Catching walleyes at one loca- ion will not always be a successful ocation the next evening, but will be fter they roam to that location again, erhaps a few days later. This is par- icularly true in lakes. One day they nay be found close to a sand bar, the ext day a mile or more away near ome deep sunken reef. One more hing, too, about lake wall-eyes, they lo not seem to have the fighting spirit s do their brothers of the stream and ivers.

Another factor which determines a uccessful wall-eye trip when trolling, he lure must move slowly, as only arely will the wall-eye exert much tamina in chasing the bait.

The most popular trolling lure is the wo spinners mentioned, and a No. 1/0 ong shank hook attached. On the ook can be impelled, two or more ight crawlers (see illustration), lam- rey eels or a minnow. Often as the inkers strike a stone, the angler can eel it on this rod and it sometimes is hought to be a walleye striking short. This seldom is the case as you will not nistake a wall-eye when he grabs the ure.

Other artificial lures are some times ffective when cast or trolled. These



Deep running plugs and spoons will take wall-eyes, too.

should be the deep running type and light in color. A deep running plug with a revolving spinner blade is often good as well as the many wobbling spoons. These, too, should be trolled slowly, however, if by chance, a school of wall-eyes are found in shallow water, surface and sub-surface lures are effective. These can be of various actions and colors. Often a finish similar to the scaled minnow type or merely a red and white is good.

Still fishing for these fish is often productive, however, it has far less action and excitement that trolling or even casting can provide. The baits used when trolling can be used while still fishing. However, I must say, the best specimens and the most were taken while trolling with the june bug spinner.

These spinners can be silver, gold or painted red and white, or yellow. The silver and gold, however, are my choice at the lure.

It is rare when many wall-eyes are taken in warm weather. Generally late August or September and especially after the first frost they begin to bite well. On the whole, most of the waters, especially the large streams in Pennsylvania, are inhabited with pike-perch. Some localities have nick names

Kill Less—Catch More

for this fish, especially in the Susquehanna river region they are commonly called "Susquehanna Salmon."

While the wall-eyes are nocturnal fish, as are the bull-heads or catfish, there are days when they can be taken during daylight. The better fishing times are the hours between sunset and sun-rise.

Their main fighting characteristics are quite different from that of trout, bass and pickerel. They are inclined to tug hard and savagely to get back to the location or school from which it is being pulled.

The best tackle to use in capturing this fish is a stout fly rod or casting rod. Many anglers favor the casting rod to troll, however, I am inclined to favor a heavy or stiff action fly rod. True, trolling will cause a rod such as this to soon take a 'set' but this is not harmful and the line and playing of the fish is much more easily maneuvered.

The fly rod, too, can be used when still fishing, the limberness of this rod makes the game much more enjoyable. The line should be about a 15 to 18 pound test so that the hook can be set with considerable force and little danger of it breaking.



The author setting out for an evening of trolling for wall-eyes in his 8 ft. pram car-top boat.

The reel should be capable of at least 50 to 100 yards. However, in casting, the standard bass equipment will be quite satisfactorily.

Of course, for trolling, a boat is necessary. This can be of any size and even the rubber air inflated rafts will do. I do most of my wall-eye trolling in an eight foot 3/8 inch plywood pram boat. This style boat is ideal for this type fishing since it weighs a bare 75 pounds and is easily transported from place to place on top of a car. It is quite maneuverable in the water and is easily handled after a fish is hooked.

Truely, wall-eye fishing is a well worth pastime. While I cannot say that I would consider pike-perch fishing if there were trout to be had, the fall restricts trout fishing and trolling for wall-eyes offer game and an exciting evening after a day of bass fishing, and the angler tires of throwing plugs and spoons as well as bugs for the bronzebacks to grab.

Trolling for wall-eyes will give enjoyable sport and does offer the variety needed to round out this beloved game of angling. They are an extremely tasty food and often are classed as the finest or best that fresh water provides.



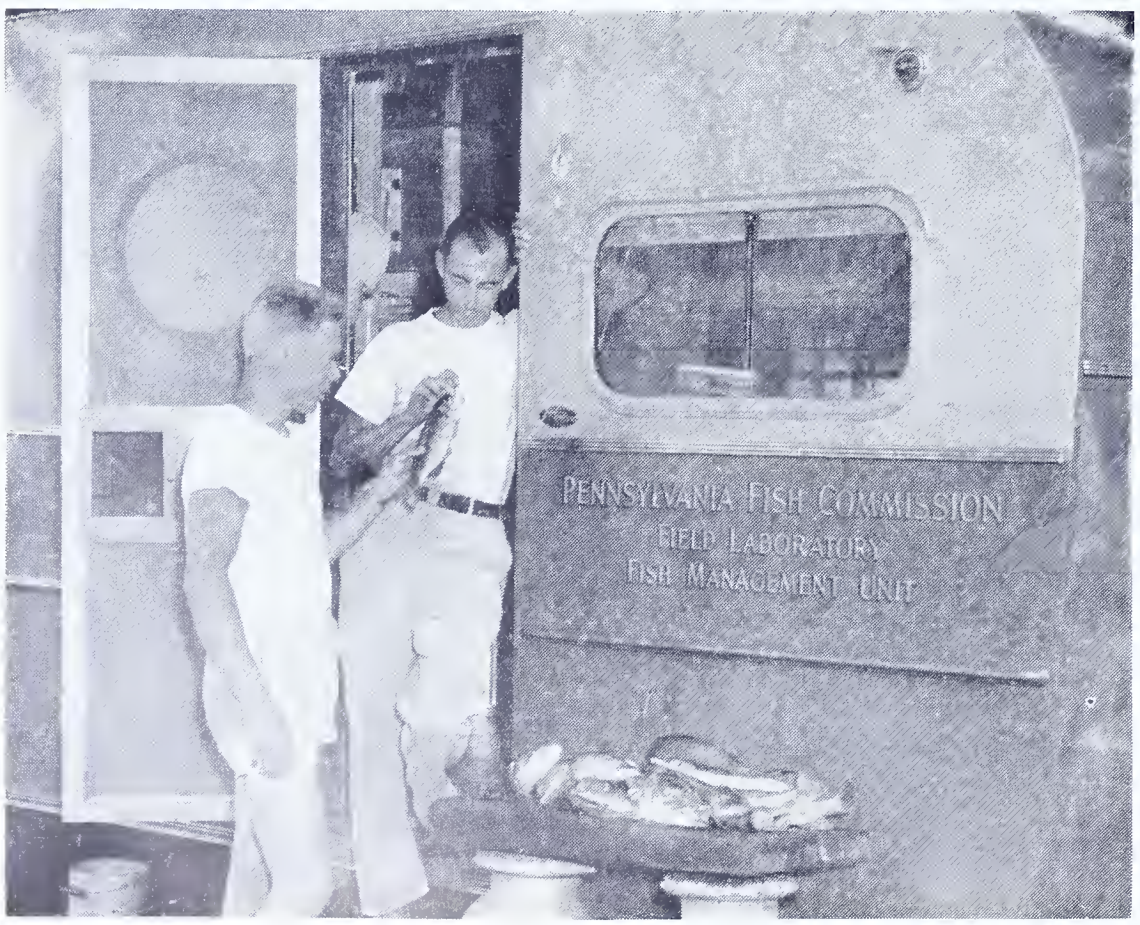
Spinners are the best all-round lures for wall-eyes. Be sure your tackle contains a number of them.

Pennsylvania Fish Management

By HAL HARRISON



Trap netting is the most important activity of the fish management unit of the Pennsylvania Fish Commission in ascertaining fish populations in Pennsylvania lakes. Here the entire management crew checks a morning catch on Conneaut Lake. Fish are returned to the water after they are weighed, measured and marked.



While most fish caught in trap nets are examined and returned to the water by the fish management unit of the Pennsylvania Fish Commission, a few are retained for further study. Ed Westlake discusses a small-mouth bass with Gordon L. Trembley in the doorway of their 28-foot mobile laboratory at a campsite near Conneaut Lake.

The greatest fish management program for Pennsylvania lakes ever attempted by the Pennsylvania Fish Commission is now underway with a preliminary survey of bodies of water in the northwestern counties.

A fish management unit, under the direction of Gordon L. Trembley, chief aquatic biologist for the commission, has completed its preliminary work on Lake Pleasant, Erie County; Canadohra Lake, Crawford County; Conneaut Lake, Crawford County; and is now at work on Pymatuning Lake in Crawford County. Other lakes included in the 1949 program include Edinboro and LeBoeuf, both in Erie County.

This is the first systematic survey of its kind ever to be attempted by the commission. Fundamental purpose of the plan is to ascertain as accurately as possible the present status of all lakes from a fish and fishing angle in order that a fish management plan may be established on a sound basis for each lake.

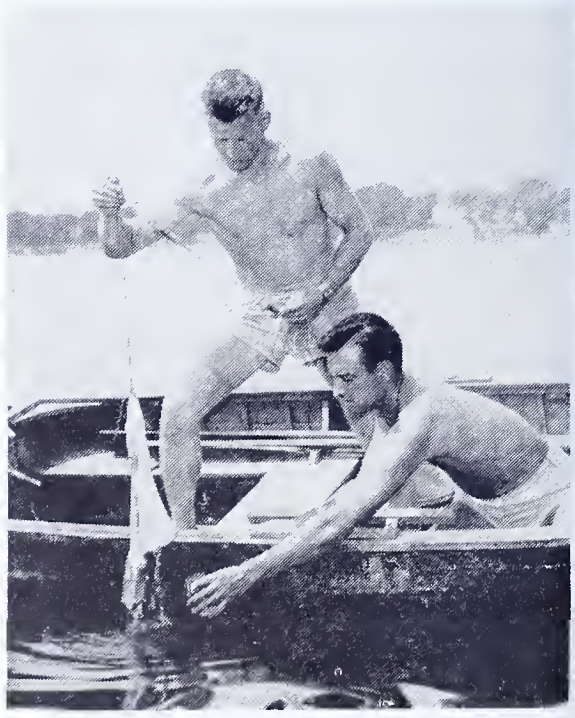
To that end, the commission has placed at Mr. Trembley's disposal a permanent assistant and a summer staff of three biological assistants. Edward F. Westlake, who took has masters degree in fisheries management at Pennsylvania State College, is assistant.

Others are Chuck French, son of the executive director of the commission, who will return this fall to study veterinary medicine at the University of Pennsylvania; and Don Adair and Dick Reppert, both students at Lehigh.

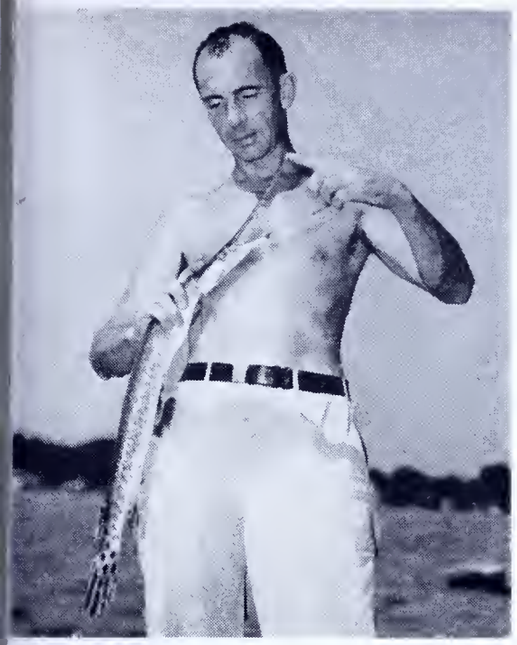
As road equipment, the management unit has a 28-foot mobile laboratory, a one-ton panel truck and a personnel car.

Asked what specific plans might evolve from this survey, Mr. Trembley enumerated several.

"To begin with, we will have a very



As Ed Westlake pulls up the plankton study net in Conneaut Lake, Chuck French prepares to take a sample of the contents. This is part of the fish management unit's program on all Pennsylvania lakes.



Several gar, members of an ancient family of ishes, were taken in trap nets in Conneaut ake by the fish management unit of the Penn-ylvania Fish Commission, headed by Gordon L. Trembley, shown here.

ound basis upon which to project our uture stocking plans. We will not guess as o which species and how many should be laced in a lake, we will know from this tudy which ones are needed and which nes are not needed. We will be guided ccordingly," Mr. Trembley declared.

"We may be forced to reduce certain ver-abundant species in some instances," he biologist continued. "Obnoxious species ay have to be controlled for the good of ther species. In some instances, we may ind it advisable to stock forage fish for ood. Control of water levels may be found o be good management in some places. We night even find it advisable to install fish gates to control migration.

"There are so many ways in which we can elp better fishing conditions after we know what we now have to work with," he said. 'Why we even hope to establish a policy of publically telling fishermen where the best fishing is in each lake at certain times of the season. It is conceivable that we can advise fishermen at what depths to fish when our analysis tells us where ideal conditions exist," Mr. Trembley concluded.

Eludes Anglers for Six Weeks

For six weeks the monster rolled around on the surface, defying the fishermen who kept up never-ending casting and trolling, trying to induce the whopper to take the lure. Finally, an artificial bait, a South Bend Pike Oreno, fooled the big fellow into striking. An exciting and different scrap followed.

The muskie never surfaced during the battle, apparently depending upon its great weight and strength to break itself from the tackle. The fish will be mounted, along with the rod and reel which eventually conquered the sockdolager.

No doubt, many people will see the remains of the new world's record musky, as it is planned to exhibit it at many of the 1950 sportsmen's shows.

In The Open

COUNTRYMAN MAKES TRIP TO THE BASS FISHING COUNTRY

By SASSY FRASS

A slow, soaking, misting rain shrouded the August countryside. Long after daybreak the rolling fog masses were still but halfway up the wooded ridges on their way to join the rainmakers in the low ceiling overcast. The weeping skies had even drowned out any semblance of breeze, and the wide bottomlands gratefully absorbed the life-giving moisture.

I rolled along the old familiar roadways, hunting out breakfast which I finally located in a hamlet not too far from the bass country. Fortified by country bacon and country eggs served up in delicious country style, I was ready to cope with any minor contingency, such as a little rain.

Twenty minutes later I pulled off the roadway by the modern bridge, which spans the famous fishing stream. A heavier shower immediately came along but I accepted the challenge and soon emerged booted to the hips and otherwise protected by a voluminous slicker. The stream was still running almost clear, since the steady drizzle had not reached run-off proportions.

Taking a hoe and a minnow seine from the car trunk I plowed through the weed tangles and came out in the shallow beneath the bridge. A scrutiny of the beams and girders revealed big splotches of hellgrammite egg clusters, looking like the splashings of a careless whitewash job. These splotches indicated good hunting on the riffles below.

Taking a stand where the creek broke fast across the shallow rips I spread the net, anchored the bottom with a flat stone and hoed up the stream bed as far as I could reach. When the silt and debris had cleared there were three big hellgrammites in the meshes, as long as my finger and perfect lunch meat for the bass I hoped to find in the pockets upstream.

* * *

There proved to be a bumper crop of the big clippers. After a half-dozen hoeings I was baited for a full day's casting. The hoe and the net went back to the car trunk and I moved up to the next bridge, which also marks the site of a large stone mill, still operating.

The creek splits into three narrow channels below this mill. I rigged the fly rod for hellgrammite work, tying on a No. 2 sneak hook, and waded down along one of these channels. The magnificent cardinal flower glowed like burning coals in the marshy edges. Here also were the big blue lobelia, the monkey flower, and the pretty yellow sneezeweed. A jagged rock cliff towered up to my left, covered with polypody fern and the leathery rock tripe.

Where the channels converge a long pool waits out the placid days. I moved into casting position at the head and worked my way slowly through the eddy. Pondweed has choked up one side leaving a wading strip between the clinging vegetation and the shelving ledges beloved by smallmouth bass.

The rod responded happily to the pull of the level line and the hellgrammite dropped close against the far bank. After a short sinking float the line quivered and moved upstream. I waited a moment, then tightened slowly and struck hard. A shining, silvery fallfish came clear in a surging splash, looking like a tiny tarpon. I brought him to land, measured him at slightly under 14 inches, and released him.

Another 20 feet and the cast brought the jerky strike of a sunfish. The hook was large for this little fellow, but I gave him plenty of time and nipped him just enough to bring him in. He was a husky long-eared sunfish, and he went back to the depths none the worse for wear. By this time I was in good bass water, but three hours later I had not raised a single smallmouth.

Perhaps the well-worn path along the stream was the answer. I went back to the car and drove up to the point where the trout waters start, hoping to find a bass or two not yet coralled by the army parading the banks. I went in at the big red rock, and then worked the pockets in a channel caused by a break-through in an old rip-rap dam.

The first cast hung up in a tree behind me, and cost all the terminal tackle. The second try got safely under the overhang above the pool and the clipper headed for the bottom. Then the line moved off down stream and kept right on going. I fed slack to the 20-foot run and pulled hard. Up came a surging bronzeback, shaking his head as the hook stung home.

I measured him at 16 inches and let him go. Two more casts brought two smaller bass to hand and then I left the fishing country and drove off through the rain, back to the prosaic world of telephones and typewriters and headaches.

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200 Fishing Rodeo Prizes Awarded

Total of 182 Ground Awards Made at Second Annual Youth Event Saturday

Upwards of 200 prizes were distributed on Saturday Aug. 26, among the 375 Chambersburg area boys and girls who participated in the borough's second annual fishing rodeo.

While the major awards were presented to boys and girls listed as winners in the various fishing contest, a total of 182 of the prizes were distributed as ground awards. The top ground award—a new tank-type bicycle—went to Herbert Faust, 10, of 33 West Washington street.

Sponsored nationally by Better Fishing, Inc., the rodeo was staged locally under the promotion of local sportsmen's organizations and cooperating merchants.

Tonkin Cane Rod Building

By GARNET D. GILLESPIE

Build your own fishing rods if you like to tinker! Listed below are the tools needed for the work.

(a) One combination steel planing V block, having 5 strip grooves on the other side (60° angle).

(b) One linoleum knife.

(c) One Stanley (No. 220) plane with two extra cutters. Have cutters reground to 70° angle.

(d) One *plane bitt honer* for sharpening bitts, and keeping even level. This may be purchased from McLaren Industries, Inc., Troy, New York.

(e) Two bastard files; fine and medium cut.

(f) One micrometer.

(g) One 64 gauge.

(h) One roll cotton cord, No. 8 or 10.

(i) Sand paper.

(j) Cassine glue.

(k) Small steel saw.

(l) One pressure winder.

(m) One ⅝″ gauge, curved.

(n) Masking tape (cotton back).

(o) Alcohol lamp.

(p) Borred corks (¼″ bore).

(q) One ⅜″ rat tail file to increase bore of corks, if needed.

(r) One pair of leather gloves. Tape thumb and finger ends of left hand to keep planed strips from cutting your fingers. The strips are as sharp as a razor blade when planed.

(s) One small plastic mallet.

Beginning Rod Construction

Start with one piece of 8″ cane 1¼″ to 1½″ thick. File the leaf marks or nodes smooth like the other part of cane (remember, nodes only). Set your linoleum knife in center of top end of cane. Tap it with the plastic mallet to start split. Twist knife and drive and twist same until you have the cane split in half, then into quarters.

At this point take gauge and mallet and cut the nodes from the interior. The quartered pieces are now ready to be split into ⅛ths.

To do this, lay top end of strip on table, pointing to the right. Drive the linoleum knife through the first node and twist it until it splits to the end.

Insert knife again at node and twist to left just half way to next node; then to the next node and repeat so on through. You will get a good follow through in this style of splitting.

You are now ready to space the nodes of your ⅛″ strips.

Select five strips (if you are building a five piece rod) for your butt section. Place them on the table as shown in diagram No. 4. Mark strips on enameled side from top to bottom 1-2-3-4-5. This numbering is done so that you do not mix them in the glueing process, and you will not have any node opposite another. If you did not stagger the strips in a like manner, and two or more nodes would be at the same alignment you would have a weak spot that may break under undue pressure or a hard flick of the rod.

Saw off on dotted line.

The next procedure will be to place your planing block on the table; the small grooved end to your right, with the fine strip groove side up. (See illustration of the five strip block).

Now you are ready to plane your strips. Select No. 1 of the five strips, to plane. Place glove on left hand to prevent cutting your fingers. In case your strip should slip or be pulled through your fingers, you would have a *severe* cut that may prevent your working for a few days.

The five strip side of your block has eight grooves in pairs of 72° angles. Place the strip in groove No. 8 which is nearer to you standing to the left. With the skin or enameled side of the strip, (by all means do not plane the enameled side of the strip), to the front, press down with the left hand fingers and plane a few shavings off the small end; thin, fine shavings only.

Turn the strip to No. 7 groove and plane a few shavings (remember very thin and fine shavings) and back again to No. 8. Continue this planing in No. 8 and No. 7 until you have covered the entire strip so the angle shows throughout the full length of the piece you are working. Continue this procedure with the remaining four strips until all are roughly alike.

The next step is to move to groove No. 6 and No. 5, turning the strip each few cuts to keep a perfect angle. Start planing at about the center of No. 6 and No. 5 groove so that you may work your strips from end to end. Measure your strips with the micrometer or 64th gauge (whichever you choose of the two), at the six inch intervals.

You should now have about completed the five strips for the butt section of your two piece rod.

Mark off on the block with wax crayon, the point you finished the ferrule end. Better still, do this from the beginning so you know at what point to finish.

You are now ready for the *tip* five sections. Work same as for butt, then through to No. 4 and No. 3 grooves, then two and one. Be careful on the fine end of tip so as not to get them too fine.

Draw a diagram on paper of a rod about the size and weight you would like to have. Mark off 6″ intervals the size of each strip that goes into the five piece rod. See figure 5 on diagram page).

When you have the two five piece sections ready to glue, place No. 1 next to 2, then 3, 4, and 5. Tape both ends together.

Assemble the pressure winder, fasten to table and prepare for winding strips without glue to determine if they fit tightly together, having no open seams. If this should occur, you will have to rework them to make them fit. When you have this accomplished, you are ready to glue. (See glueing diagram—figure 3).

Cut the tape, you have bound at each end of strips, on seam between *one* and *five* with both ends the same alignment. Lay them apart as above; tape holding them together. (See that they do not come loose and get mixed).

Prepare glue and spread over entire interior surface of strips. This glue should be mixed to a heavy creamy consistency.

At this point, fold or roll the five strips back together again.

Place pressure winder belt around strips two turns away from you and lay glued strips on winder belt. Pull cotton cord to and under left turn of belt. Start the crank handle to right and presto—your glued strips move to the right pulling rod section to right and winding to left end of section. There will be even spiral winding throughout whole section. Start belt wind at heavy end.

Cut off cord, fasten with two half hitch knots. Repeat this process and add five more pounds of weight to increase pressure of second spiral wind.

Instead of winding the belt away from you on the second wind, you make two wraps or loops toward you and pull cord through left hand loop. Start crank handle to right, as before. The second winding will overlap between the first winding throughout entire section. Cut off as before, fastening both ends with tape.

To insure more pressure, wet the entire cord or winding with wet rag or sponge. When dry it will increase pressure.

Roll the wound section on table to remove curves and kinks. Flex in hands until straight. Hang section with weight attached for a few days.

After about a week, remove cord windings and store for three months, after which time the glued strips should be correct for finishing except for a set or so. This can be removed by heating over alcohol lamp flame and bending straight.

The sections are now ready for the finishing product.

Sand the skins from the two sections only until fiber lines show. Smooth with steel wool. Place the drilled corks over the small end and force down to butt end that has had a little glue on to hold cork No. 1. If the corks are a little hard to force into place, use the round rat tail file and make the corks a trifle larger. About 18 or 20 corks are needed to make the handle and reel seat.

Force the corks together, glueing each one and pressing together as you put them on. Slip a piece of lead pipe over the end of the rod sliding it down, resting it against the last cork to insure pressure and to keep the corks together. Let them dry for 24 hours.

The reel seat and handle are now ready for the finish to any pattern you desire by filing and sanding into shape.

You may have either a screw locking device on the end or the French ring design.

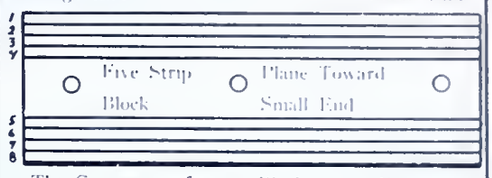
File only the corners off the glued section so the furrel will go on a little hard with the furrel bond. Heat after it is on and it will stay in place.

Next, place tip guide. Measure spaces for other guides and wind them on evenly with a rod winder and rest. You may varnish the entire rod or at guides only. Wax and rub rod.

You now have a better fishing rod

(*Turn to Page* 17)

Fig. X



The Grooves on 5 Strip Block are in Pairs
First Rough Plane the 5 Strips in Groove's 8-7
Then 6-5—4-3—2-1 Until They are the Proper Thickness Throughout the Entire Strips

Fig. XI



Diag. of One Strip
Mark in at 6" Intervals the Calibrations You Want The Strips to be
Make All 5 Strips the Same
They Will Fit Perfectly When You Assemble Them Together

Fig. I

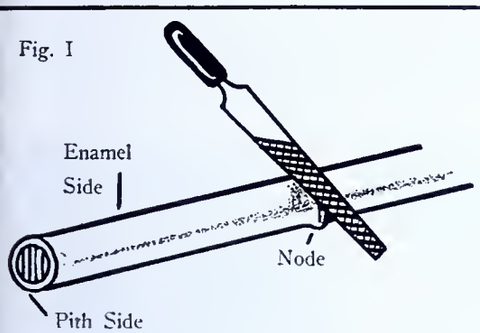
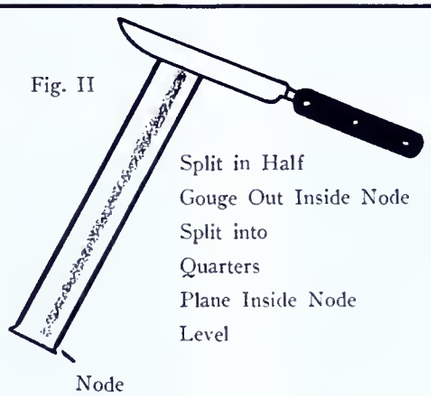


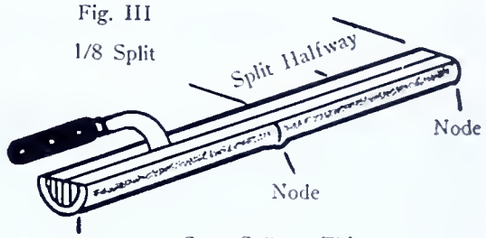
Fig. II



Split in Half
Gouge Out Inside Node
Split into Quarters
Plane Inside Node Level

Fig. III

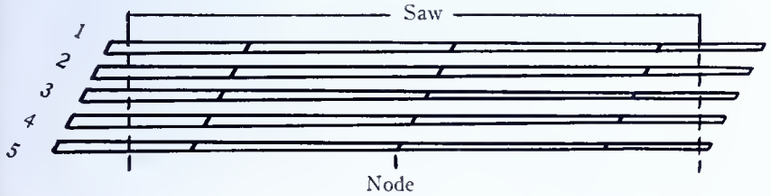
1/8 Split



Start Split at Thin End at Node

Fig. IV

Laying Out Nodes 2" Apart



Number Strips at Heavy End
After Sawing Dip Heavy End in Ink
Number on Enamel Side

Fig. V

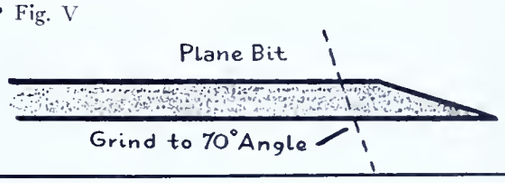
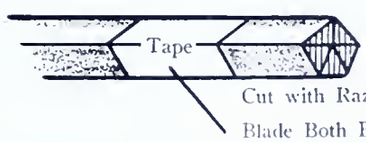
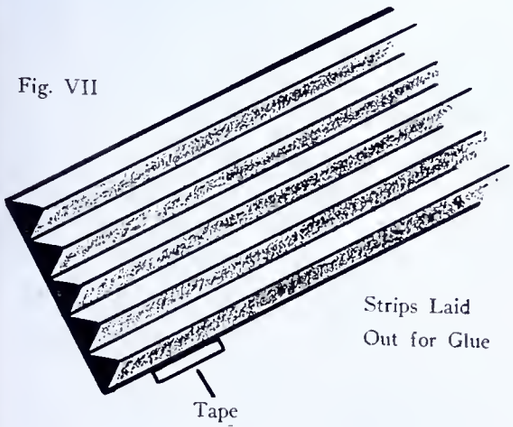


Fig. VI



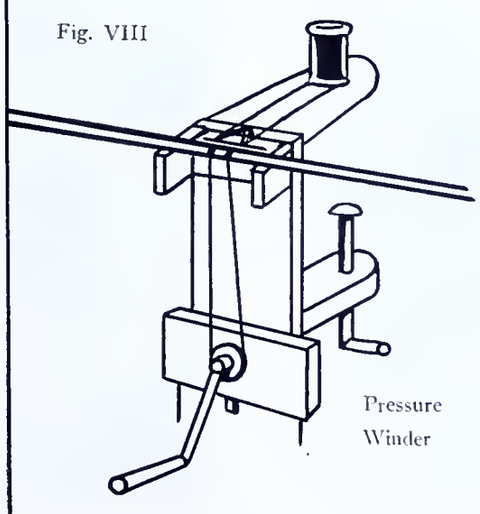
Cut with Razor Blade Both Ends in Line

Fig. VII



Strips Laid Out for Glue

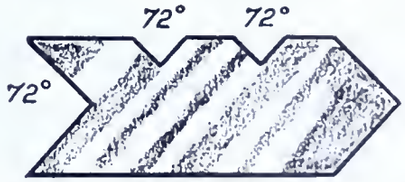
Fig. VIII



Pressure Winder

Fig. IX

Fasten in Vise Pull the Planed Strips Through
Exert Pressure to Remove Slight Excess in Spots



Make from a Thin Scraper Blade a Depth Guage You Can Purchase 60° at Hardware Counters for 6 Strip Rods

PENNSYLVANIA REPTILES & AMPHIBIANS

A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

No. 7 . . . Snapping Turtle



NORTHERN SNAPPING TURTLE (Chelydra serpentina serpentina) . . . Characteristic is the walking stride of the snapping turtle with its shell held well off the ground; characteristic, too, is the saw-toothed tail which makes an ideal handle for carrying; may be distinguished from all other local species by its very small phastron (bottom shell); average adults weigh 15 to 30 pounds, maximum about 60 pounds; probably occurs throughout the state.



JAWS OF SNAPPING TURTLE . . . Covered with sharp-edged, horny sheaths; "snapping" turtle well-named, for this largest and toughest of all local turtles strikes viciously at its prey and enemies; is capable of inflicting painful and serious injury to humans; this aquatic species is both beneficial and harmful, at times taking a heavy toll of ducklings; important predator of dam-tunneling crayfish; economically most important as the principal ingredient in turtle soup.



SNAPPING TURTLE LAYING EGGS . . . Above is photograph of a female snapper laying her eggs at night in a cinder bank bordering a marsh; flask-shaped cavity to receive eggs is constructed by digging with hind feet; nesting sites are varied (muskrat houses sometimes are used) but general requirements are moisture and an open sunny area; laying completed, female covers eggs carefully and leaves, never to return to her nest; incubation proceeds from natural warmth of sun.



SNAPPING TURTLE EGGS IN NEST . . . Above photograph was taken when female was removed from nest after laying was completed; 30 eggs in this nest; usual clutch 24 to 40 spherical, hard-shelled eggs, resembling half-sized ping-pong balls; June is usual laying month in northeastern states; hatching may occur in September or October, but variations are considerable due to different seasonable conditions and varying nest temperatures; eggs may carry over the winter, young emerging in the spring.



SNAPPING TURTLES HATCHING . . . Photograph taken in September of eggs collected in June; besides man, large turtles seem to have no other non-parasitic enemies, but young turtles are relished by crows, hawks, various mammals and even large fish; migration of newly-hatched snappers to water is believed guided by open horizon, humidity and position of sun; in winter snapping turtles hibernate in mud, body functions slowed by numbing cold.



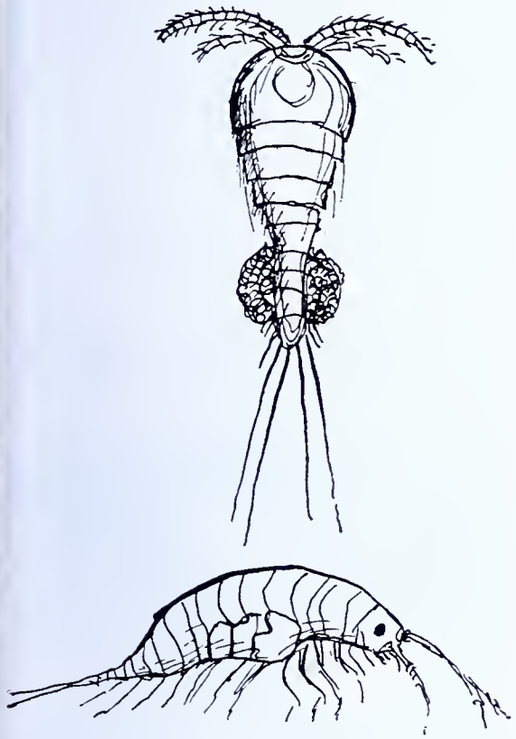
TRAPPING SNAPPING TURTLES . . . Snapping turtles are unprotected in Pennsylvania; popular method of capture is in net trap with funnel-shaped openings; traps are baited with raw meat or fish entrails to which turtles are attracted by sense of smell; popular method of taking very large turtles is hand-line fishing with fish heads or raw meat bait; M. Graham Netting demonstrates method of handling reptiles in photo above.

THE MINIATURE CRUSTACEANS

By Carsten Ahrens

The term Crustaceans means to most of us those larger well-known members of this group of animals: the marine lobsters and crabs, the freshwater crayfish, the aquatic shrimp, and the terrestrial sowbugs. But the waters of the world abound with their tiny relatives that are usuall less than 3 mm. in length. These are the Daphnia and the Cyclops.

If the creature is oval, begins with a beak below the head and ends in a sharp tail spine, it is apt to be one of the Daphnia, and is commonly called a "water flea." All of them have powerful branching antennae which are their chief organs of locomotion. Strong muscles snap the antennae forward, causing the little animal to skip or leap about in the water. This hopping about has given them the name of "water flea." Most of them are enclosed in a shell that seems to be bivalve. The six pairs of feet are not used for locomotion but lie within the shell



and keep a steady current of water passing in and out of the shell. This stream supplies oxygen and carries food.

If the creature is slender and streamlined, lacks a shell, has well-developed swimming legs, and has a solitary eye, it is one of the Cyclops.

The miniature crustaceans have been known and studied for almost as many years as the microscope is old. The first of the Daphnia was described away back in 1669; the Cyclops, a little later. They are complex animals possessing well-developed nervous, locomotive, digestive, and reproductive systems. But though complex, they are so small that often they are eaten by one-celled animals (like the stentors) which though extremely simple are larger than the "water fleas."

The miniature crustaceans are aquatic although a few get along out of water if the habitat is damp. Most of them prefer still water; they are commonly found in weedy ponds and lakes. Since they often occur in arid regions where only temporary bodies of water exist, it is believed that they dry up and are carried about by the wind during this resting stage.

Although these animals are very minute, they are extremely important in an economic way. They are a most necessary cog in a complex balance of nature. Their food consists of bacteria, algae, and the smallest of Protozoa. In turn, they become the food of water insects, small fish, and these are preyed upon by larger organisms. This goes on, up and up, until man is involved. Since these tiny crustaceans occur in prodigious numbers, it would be difficult to over estimate how important a factor they are in the food chain. Should they suddenly disappear, the entire food scheme of the fishes, amphibians, reptiles, birds, and mammals would have to change.

Biological supply companies, pet shops, and fish hatcheries usually keep rich cultures of Dahpnia and Cyclops on hand because they are the standard "baby food" for small fish and many other water animals. They are easily reared in gallon jars to which lettuce leaves are added. Care should be taken that leaves and water are renewed frequently, for the colony will die if the water becomes stagnant.

Reserved Seat For Trout Anglers

It is now, in its most delightful phases, a period during which the mind and the muscles of which we are made can be put to a different task than the winning of the bread, no matter what the endeavor requires of the individual angler. While he is trying to place a bivisible grey hackle on exactly one of the tens of thousands of square inches of surface of a favorite pool, he is resting from any and all cares which may have annoyed him "back in town." He's a different man while he's there—and in most cases he's a different man when he goes home.

And he's storing away memories which will stand him in good stead in place of the actual excitement during those months when he can't fish. And if he improves enough on what actually happened, he might even have one good enough to tell the boys. All fishermen are liars—and I've even caught ministers stre-e-e-etching things just a little bit after a few angling expeditions.

But most important he's getting hepped up over something out of the ordinary from the daily grind. He's also making plans for the future—because no matter what one's faith or ideas about the hereafter, it is common knowledge that a special place in Paradise is being held for fishermen.

The trout fishermen, moving slowly and quietly along a remote streamside also gets plenty of opportunities to study many forms of wildlife as they call themselves to attention by a sudden flicker of a tail, a call, or a splash in the water. But these are the interruptions one welcomes in the day's business of catching trout. They don't ordinarily spoil the fishing, like the interruptions made by the chief trout stream spoilers of all.

What's New in Fishing Books

Reviewed by Hugh Johnson

ONE THING: the rest of us can put away our typewriters now, and set up our rods and head for the nearest stream. There won't have to be any more books on trout fishing. Dan Holland has said the last word. . . . .

Those are the words of Corey Ford and Alastair MacBain in their Foreword to *Trout Fishing* by Dan Holland (published September 1949 by Thomas Y. Crowell Company, N. Y.—$5.00). Ford and MacBain have apparently fished all over the North American continent with Dan Holland, and a note of extravagance in their endorsement of their fishing buddy's new book is to be expected. However, while Dan Holland, in *Trout Fishing,* has not said "the last word," any more than anybody in a book or in fireside conversation will ever be permitted to have the last word on trout fishing, he has nevertheless come up with a book that is quite extraordinary in its scope, both geographical and topical, and at the same time is meticulously informative about all the important aspects of trout fishing.

Trout Fishing is physically big—457 pages (including 16 pages of photographic illustrations and a beautiful full-color frontispiece), and it is big in concept. From the Newhalen River in Alaska to the Brodheads of Pennsylvania, from the Big Hole of Montana to Pierce Pond in Maine and back to the Duckabush River in Washington, Holland takes us in Paul Bunyan strides all over the U.S.A. fishing map. It leaves us a little short of breath but with a glow of pride in America's resources and an unsolicited tribute on our lips: "Brother, this guy has been *around!*

To a greater degree than any other book I've ever read, I felt, with every page, that I was out in the great open spaces with rod in hand—catching those fabulous Arctic char north of Nome, the 18-incher on the Battenkill, and the 16-pounder out of Lake Pend Oreille. And yet this thrilling tour of the continent's big and little trout waters is simply backdrop for the main presentation —the author's description of the kinds of trout, the life history and senses of trout, troutfood and habits, and complete how-to-do-it information on the catching of trout. Dry fly, wet fly, nymph, streamer, spinner fishing, spinning, bait casting, bait fishing (in about that order of Dan Holland's preference) are all covered, and he winds up with some pleasantly discursive chapters such as "Fishing in the Rain" and "Conservation and the Future." He tops it all with a little last-chapter-essay called "The Evening Hatch" which is, in prose that is close to poetry, a neat expression of the be-all and the end-all of trout angling.

The chapter-head drawings by William J. Schaldach, America's foremost angler-artist, are an extra bonus in this superb book—an absolutely *essential* book for the collector, and highly recommended for every trout fisherman.

"A Ten Day's Adventure at the Junior Conservation Camp"

By EUGENE DEWEY

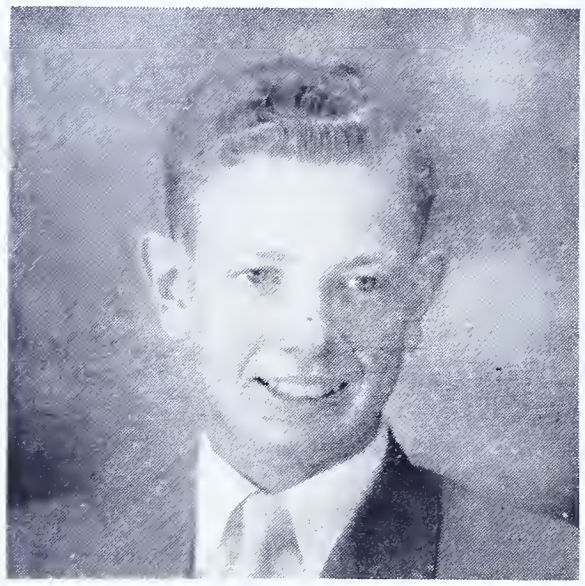
A Junior Conservation Course; these words struck no chord of special interest in my mind when I first heard them. Of course I'd known about conservation for a long while. As far as I was concerned it involved such practices as preventing erosion, eliminating waste in the use of our forests and minerals and perhaps more remotely, helping our wild game reestablish itself in depleted areas. Beyond these rudimentary ideas, my conservation concepts were rather vague.

Nevertheless there it was. The Consolidated Sportsmen of Tioga County had announced an essay contest through which boys for this course would be selected. I thought about the whole thing for quite some time. At length I concluded that perhaps conservation wasn't such a remote subject after all. I came to realize that every sportsman and lover of the out-of-doors must directly link his recreational persuits with conservation practices and that where these practices were neglected the sportsman must suffer. That very evening I sat down and began putting some of these thoughts on paper.

It was still with some measure of apprehension when, several weeks later we wound through the Pennsylvania countryside and came in sight of the camp where the course was to be held. We had come only a few miles outside of State College when we saw the signs directing to the camp and at length the camp itself appeared as we came over a little knoll and looked across the valley. In only a matter of minutes we were registered and comfortably settled in our tents. Then we had time to look around a little. First we went through the main building, a handsome rustic structure with a spacious dining room and large fire place. Adjacent to the dining room was the office of Charles Ridenour, our camp director, who at the moment was registering the rest of some forty-six boys who attended the camp.

I guess all of us had that anxious and expectant look when we first got there. This sort of thing was new. None of us had ever heard of conservation education in this form before. Yet there seemed to be a mutual determination among us that our stay at the camp and with each other would be a profitable one.

That very evening we were introduced to one of the exceptional features of the camp. We sat down to tables laden with an abundance of wholesome and well prepared food. This somehow stimulated our ravenous appetites and soon a brigade of milk pitchers and empty dishes were streaming into the kitchen for the refills which were there for the taking. Perhaps fifty percent of the morale of a group is dependent upon the kind of meals which are served. At any rate we all agreed that they played a big part in making the camp a success.



EUGENE DEWEY of Mainesburg, Tioga County Eugene is the author of this article which he lived at the Junior Conservation Camp.

After supper we assembled on the back steps of the main building and met with our directors and counselors who briefly outlined the camp program. It seemed that from that night on we began to consider ourselves as one big family thrust into common paths of opportunity and circumstance. We realized that the extent of our benefits derived here was dependent upon our cooperation with our directors and with each other. After this meeting we filed back through the main building, glanced at the bulletin board to see who shared tomorrow's assortment of duties, and then willingly sought our tents where welcome cots awaited us.

Those mornings at the camp were wonderful and inspiring ones. Sometimes though it was a little hard to leave those comfortable cots when one of the counselors would call us. But as we looked out the tent flap we were met by the cool morning air laden with its enshrouding burden of fog which swirled about our tents and tempted the lazy sun to drive it away. Then in the washrooms, sleep-laden eyes brightened as cold water met them. This was invigorating and we enjoyed it. By this time the first bell for breakfast had usually rung and had brought us filing into the dining room. Another fine meal, whole hearted fellowship around the tables, and the expectancy which accompanied each new day, all had their part in making those mornings unforgettable.

This was an average day's program. Directly after breakfast Mr. Ridenour, our camp director, gave us the schedule of the day's activities. Following this we had about an hour to make beds, clean tents, or catch up on a little sleep which we had somehow missed. By this time most of us had become rather well acquainted with the camp life and with each other. Those common ties which bound us all in a mutual love of the out-or-doors, now seemed to draw us together as a group, making us determined that we would learn and absorb these principles of conservation. And now we were about to see how this training would be presented to us.

The next day after we arrived at camp consisted of an introductory woodcraft course given to us by Mr. Ridenour and the Dittmar twins, our counselors. We called it "survival in the woods" and through it we learned a few simple operations which would enable a man to keep alive in the face of adverse conditions. We made emergency fishing leader from Indian Hemp, we drank water from a cut grapevine, and watched the Dittmar twins boil water in a paper container. In the afternoon we were given instruction in the use of map and compass when plotting courses. We later put this knowledge to practical use by determining the angle of direction to a particular point about a mile from camp and then hiking to it.

This was all extremely interesting and we'd made quite a day of it. The tent flaps were pulled rather early that evening and the next morning found us eager for some new adventure.

The ten day's program was conducted by the various state departments of the Commonwealth which are concerned with wildlife and conservation. These included the Game Commission, Fish Commission, Department of Forests and Waters, Soil Conservation Service, Sanitary Water Board, and the supplementary services of the Mineral Industries and Wildlife Research departments of Penn State.

Space doesn't permit a detailed account of all the activities under the

direction of these departments, but I will dwell briefly on some of the more impressive points of each. There was some thrill in seeing and hearing these representatives of the state agencies about which we had heard so much. That remote light in which we might have regarded their functions before was brushed aside as we learned how their activities affected us personally.

The day flew by so quickly, each one packed with wholesome and interesting activity. It didn't take us long to appreciate the swell job our directors and counselors did in managing the course. Here is a brief sketch of the part played by each one in making the course memorable and its significance indelible. There was C. W. Stoddard, state chairman of the camp who made the program arrangements and came to the camp at intervals to talk to the group. Then there was Mr. Perez of the Engineering Department. We all came to like him real well especially when we saw him coming up the road with a truck of food on those days we spent away from camp. Then there was Charles Ridenour, wrestling champion and ardent sportsman who had charge of the actual administration of the camp. And to make this team complete, there were the Dittmar twins, John and Jim, who served as our counselors and through their efforts found a place of admiration and respect in the hearts of each of us.



Joseph Balutis, aged 16, who lives in Girardville, proudly displays a fine large mouth black bass weighing 14½ lbs. and measuring 20½". Joe caught this fine fish in Fishing Creek near Bloomsburg on August 12, 1949.

With such an administrative group things were bound to be accomplished. Through their combined efforts we were introduced to these concepts of conservation, one of the most important among them being the development of finer human resources within ourselves.

The activities of each of the state departments had its precise part in the course. Lectures, hikes and bus trips were fitted like clock-work into the program. Under the Department of Forests and Waters we visited the State tree nursery at nearby Greenwood Park. We visited a fire tower, saw the cutting of a fire trail and the methods used in modern fire fighting. We learned more about trees common to Pennsylvania, their habitat and their relative importance to conservation. Our field trips were conducted by men who had made the study of wildlife their occupation, who had learned the habits of wild game, and could present this knowledge in an unforgetable manner.

Fish Commission representatives took us through the Pleasant Gap Hatchery where we saw the fish used to stock our streams in the various stages of their development. Next we saw the bass propagation program and in the afternoon fished in the famous Fisherman's Paradise. Each evening the department in charge showed movies illustrating their activities or related subjects.

The Wildlife Research Department of Penn State conducted two hikes through the college forests and showed their methods of wildlife and forest management. This demonstrated the interrelationship of the entire course.

Under the direction of the Game Commission we were shown the framework of that agency and the integral part that its functions have in relation to Pennsylvania game. We were given instruction in gun handling and safety and in the afternoon a small bore shooting match was held. A trapping demonstration was also part of their program.

In the program of the Mineral Industries department of the college we saw the vital part that the mineral resources of the state played in its economic importance and our resulting peril should we not safeguard them. The Sanitary Water Board presented to us the criminal facts connected with stream pollution. The Board representative spoke of the devastating conditions which sewage disposal and industrial waste had wrought in our waters and the responsibility of each sportsman to join in the struggle to make Pennsylvania again the state of sylvan streams and sparkling waterways.

The last day of our program consisted of a bus trip to a point designate by the Soil Conservation Service about sixty miles south of the camp. Here had been practiced conservation measures which had not only increased agricultural production but had nearly doubled local game numbers by providing adequate food and cover. This is typical of the farm game management which could be practiced by any landowner who might be brought to realize the service he could render wildlife through this program.



Dr. A. Byrl Runkle, of Sandy Lake, displays a fine 19" large-mouth black bass from the throat of which he has just removed a full grown sparrow.

And so with this our course ended. Yet we feel that its import will never end. We feel that we've been privileged to be a part of this great movement at its beginning. Such a presentation of conservation facts could never die in the minds of those who heard them. Rather it may be a perpetual forward stride, an invincible element seeping into every section of the State, dispelling the darkness of misconception and illuminating our road ahead, our path of victory.

Reluctantly we packed and finally wound out the road that had brought us to the camp. Yet we rejoiced to have been a part of this institution, this place where minds have caught a vision of fields to conquer, where hearts have ignited with the determination that through our efforts the natural wealth of our State and Nation will rest secure.

The Return of Silver Bill

By JACK ANDERSON

With skin like plucked geese twelve members of Trout Creek Angling Association fished for junk and built rock shelves in water that had been bitten the night before by early October frost. We worked like beavers; that is, like beavers who had brains enough to occasionally rest. During one of these breathers Johnny Green stepped onto an eroded creek bank.

He gazed through coffee steam and orange, late afternoon sunlight down the small, restless stream. "We'd do this for nobody but Silver Bill," he said.

In hunting clothes and hip boots we stood there, hot coffee cups caressing numbed hands. Silently we nodded. Since the work was my idea blood touched my cheeks like a hot hand. Maybe I was too much the sentimentalist. Before too much of such thinking, though, Jim Forrest rattled up with a jittery pickup truck. We dumped down the muddy liquid and got to work.

"This the fifth or sixth load of junk we fished out?" Johnny Green hooked a gnarled rust-scarred tea kettle from the tin cans, bottles, old shoes, and assorted flotsam on the stream bank and loaded it onto the truck.

"Sixth." Ed Roland tossed an old automobile tire with a disgusted grunt.

"If Silver Bill'd a seen this crick, he'd of died." Johnny Green turned downstream, and I followed his stare along the browning meadow, with its mud paths trampled by our weeks' work. I watched the stream churning white-lipped around gray rock deflectors we had patiently erected.

In a few minutes the junk was loaded and we wearily agreed to call it a day. I had another job to do for the project.

Alone, I nudged my car over to the Samson Truck Manufacturing Company.

"I got your card and was expecting you." A slim balding businessman introduced himself as Sam Melvin and invited me to sit down in one of the soft leather chairs of his office. I called attention to my muddy clothing. As 'Id hoped, he shuddered aside my fears. Eagerly I wormed my tired muscles into the chair. We had a cigarette together.

"I represent Trout Creek Angling Association," I began. "I came to see you about Trout Creek."

"Trout—" Bewilderment climbed into large gray eyes. "What's that?" Suddenly the cigarette's red eye jabbed toward me. "Oh. You mean that little creek winding back of our plant."

I nodded. "It goes through the heart of Pleasant Point. Before industries moved on its banks and rows of houses were built along it in our south end, it was a nice trout stream."

Sam Melvin smiled. "Now it looks like an open-mouthed sewer."

"Looked." I took a draw at my smoke. "We've been cleaning up. We're going to try to get the state to restock the creek and open it to fishing again. That's why I came to see you. Since we've been working we've seen milkish liquid coming from your disposal pipes and seen suckers gasping for air and rolling over on their backs."

Again the smile. "I don't doubt. That's a chemical we use in our painting department."

That straight-from-the-shoulder answer bumped me pretty hard. It sounded as if stream pollution was an accepted thing. Anger touched my heart. At the time I failed to consider that I had watched the pollution for ten years and said nothing.

But an instant later I was Sam Melvin's friend.

He was saying: "Of course this plant has always prided itself in civic cooperation. This matter will be taken up with our engineers, and believe me,



A beautiful stream untouched by pollution.

by the time you are ready to restock our noses will be clean."

I'd won my point. As we were shaking hands the businessman asked: "What brought this on? Everybody around here goes up to the mountains for trout fishing. Who—"

I tamped out my cigarette. "Ever hear of William Lester—or as he's known better, Silver Bill? . . . No, I guess you wouldn't have. He used to teach school here in Cross Fork. Most of us guys around here were in his room. He was our favorite teacher. On the opening day of trout season he'd take us out on Trout Creek and teach us how to catch brookies. He had the school board on his neck, I know now, but he didn't care.

"Finally he got us kids interested in a fishing club. We called it the Trout Creek Angling Association. The outfit kinda grew with us, till today it has fifty members."

"And William Lester—" Sam Melvin began.

"Silver Bill got asthma so darn bad he had to go West to Arizona. He's been teaching out there for years—math in a high school, a promotion over our one horse school." I got goose pimply. "He oughta be a college psychology prof for all the human nature he knows. . . . He's retired now, and I got a letter he's coming back to Pennsylvania, on what he calls a last visit. He can't stay on account of his asthma."

Sam Melvin nodded, squeezed his smoked cigarette into a tray. He didn't say any more till I was leaving.

What he said then gave me thought while I was driving home. "What you fellows are doing is cleaning up the creek for the sake of your old teacher." The thought wormed into my brain that we were merely trying to scratch sand over our mistake, not really pleasing Bill. I went into the house forgetting to close the garage door.

Anyhow I got bit by the bug to get things done. I took off a few days from work and struggled around in the creek.

Driving to the creek one morning I saw workmen unloading a septic tank in Jim Forrest's yard.

"By God! So Jim was one of those fellows got sore when the town couldn't extend sewage over his way during the war. He connected his bath room to the storm sewer."

It was surprising. And I winced, recalling bits of paper we'd seen gliding in Trout Creek's rapids.

But Jim Forrest's tank was buried when I went to see Fish Warden Jeff Bailey.

Fat, genial Jeff took me into the cluttered parlor that also served as an office and listened quietly to my story.

"Ain't no reason why we couldn't get the state to restock brookies in Trout Creek," he said, jerking a mechanical pencil from his checkered shirt pocket. "I'll write to get the biologists to test the creek."

I stopped Jeff's hand before the pencil could meet the yellow memo pad. "Can't you phone and save time? We'd like to stock as soon as we could, so's the trout could get wild by next opening day."

Jeff grinned. "I'll see what I can do." . . .

It was November when the state fish truck arrived from Bellefonte with five hundred sun-splashed brookies, fat and wild and wriggling. Watching them slip into the creek, old memories touched my heart.

Jim Forrest yelled: "Lookit that big one go! Back for that old stump where I used to get so many strikes!"

That winter we were like kids. We walked along Trout Creek on mild days to see our trout streaking for cover. On long winter nights we swapped stories about Silver Bell, anxious now for his coming.

"I used to wonder what it was made his gray eyes light when he talked about going fishing," I remarked to Johnny Green over a mixed drink one night. "I don't wonder any more. I can see now why he'd risk one of his asthma attacks for a day along the creek." I paused then, a warm hand brushing my heart as I thought of Silver Bill's many years parted from streams he loved. I recalled that I'd said the old guy was getting cranky the school term before he left. I'd said he wasn't the good guy he used to be.

"How he'd burn me up when he got me up to the blackboard on a math problem," Johnny Green said. "Usually I couldn't hit the right answer, and he'd only say 'Think. Think! I'd

(*Continued—next page*)



Stocked trout can be wiped out by one pollution blow.



Three nice brown trout.

rather have you see the mistake than for me to tell you.'" . . .

February came. Like all good trout fishermen, we got our tackle together. That opening day nervousness was creeping up fast by the time Silver Bill landed in Cross Forks. It was April 9th, six days before the season opener.

When Silver Bill had walked in years before I'd always felt a deep stirring inside. This sensation returned when he stepped from the train.

Out of my childhood came the thought that here was a man too wise to be fooled. More stooped, the silver hair more sparse, with his pants still hanging down too far, his suit crinkled as ever, there was that old sureness about him. The laugh was there in the gray eyes, still reluctant to move into the open on his lips.

Within ten minutes Silver Bill was telling us how anxious he was to try the old holes. His first trout fishing since he'd gone to teach in desert country.

We let him get settled in the special room at my house, then took him by car down to Trout Creek.

Well I'll tell you, there is no pleasure deeper than observing an old friend's happiness. I'd felt guilty about hiding the truth from Silver Bill, but I forgot guilt when I saw gray eyes lighting as they swept the clean meadow and fresh-scrubbed creek.

Silver Bill banged a withered fist into the palm of his hand. "That stump down there—that's one of my favorite spots! An' down by that bend —say, I've got to tie up one of my Trout Creek specials. They're the real McCoy for this creek!"

Time danced by like a swollen river. It wasn't until the night before opening day that I inquired in an offhand way about Silver Bill's health.

Over a new line that he was waxing the old teacher said: "I'll have asthma all of my life. I can control it by living in a dry climate. I wanted to come back here, sure—to stay—but a New York specialist supposed to be the best in the country told me even a visit was inadvisable."

He went on with his waxing, and I said nothing further. I had a sudden feeling, however. Silver Bill had seen a New York specialist—and he hadn't seen him before he left originally for Arizona, I knew. I was rolling the whole thing over in my mind, grinning a little, when Jimmy Forrest and Johnny Green tapped sneakly like on my window. Unobserved I hustled outside.

Johnny Green wildly waved his hands. "Cripes. It's happened!"

My weight seemed to slam into my feet. "Now what?"

"You know the big boss down by the auto factory said he'd see no more chemicals were dumped into Trout Creek. Well, somebody forgot." As I gasped: "Yeah, that's it. Dead trout all over the crick. I doubt if one is left. The big boss—Sam Melvin I guess his name is—promises to replace every trout at his expense and stock five hundred more besides—but for tomorrow, *we're licked!*"

Like lightning my temper struck, tightening my muscles and locking my jaws. Then I sighed.

"We worked hard on this thing. The old man is looking forward to his fishing. We'll go out tomorrow as if nothing happened."

There were weak nods. When the old man started stirring inside the house, the gang scurried like frightened trout.

At six the following morning we were all there, assembling our tackle in a cold, frost-painted dawn. While feeding line through my fly rod guides I glanced toward Silver Bill.

Waters murmured, dim and steady, as I caught two sparkling gray eyes against the dawn light. They say beauty lives only in the eyes of the beholder, and I believed it then. Sky and stream and meadow were in Silver Bill's eyes. He didn't have to speak. I knew. He was thanking God for this morning.

But pain screwed into my heart. What a disappointment this was to be!

We fished. That is, Silver Bill fished. The rest of us played at fishing. We weren't trying; we knew it was useless.

Silver Bill moved quietly along stream, searching out his favorite holes with his old familiar care. It was damp along the creek, and I sadly shook my head as Silver Bill wheezed slightly.

"Here you are," I told myself, "letting that old man risk his health. And for what?" Quietly I resolved to tell the whole truth . . . and then saw the savage jerk on Silver Bill's rod.

I felt *that* jerk at my heart. My mind was digging frantically for an explanation when the biggest brook trout I'd ever seen in Trout Creek wrenched himself on the surface. I saw Jim Forrest running with the net, three others at his heels.

"An old timer gradually got immune to that poison!" I exclaimed, stumbling downstream. "An Silver Bill had enough faith in the stream to ferret him out!"

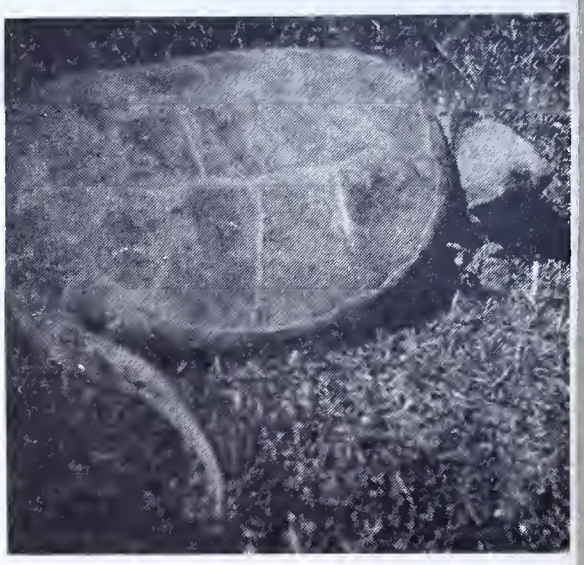
An old timer he was, that brookie—and he was up against an old timer. He zoomed for roots, lashed with the current, sulked; always with Silver Bill keeping steady pressure. It wasn't until the old native was in the net that I realized Silver Bill was having a severe asthma attack.

He had a doctor's prescription and stuffed a couple pills down his throat. But we all knew he had enough fishing for health's sake . . .

Silver Bill left Cross Fork two days later, the receipt for his brook trout, with the taxidermist's signature, one thing he checked along with his baggage . . . to make sure. When that black engine puffed into the station, I had a bitter thought: I wouldn't see the old teacher again. It made it tough to stare at his silver hair, his crinkled face, to watch those gray, smiling eyes.

"That stream's been a big part of my life." It was part of Silver Bill's last speech before he got on the train. "It's meant a lot to fish it again. Especially to be as lucky as I was."

A little while later, when the train was struggling on a distant hill, I remembered some thoughts I'd had fishing Trout Creek that opening day, how I'd figured where fish would be if there'd be fish, how I'd felt I was back with an old friend who I'd badly let down.



Snapping turtle: like pollution, the angler's enemy.

Ed Roland was talking to the distance. "Too bad Doc's asthma will be keeping him away from the crick. That's *really* going to be fun when we get it stocked up again."

Johnny Green nodded. "Yeah. Hey, you know, Silver Bill ain't changed much since the days he was showing us our mistakes, has he?"

We all nodded. But I was the only fellow who spoke. "No, he hasn't changed. He still knows his boys like an open book."

Fred Weller Dies

The PENNSYLVANIA ANGLER reverently announces the passing of Fred H. Weller, Jr. former president of the Lackawanna County Federation of Sportsmens Clubs. The effective work and administration of Mr. Weller in the field of conservation will long be remembered by those who had an opportunity to know him. The ANGLER salutes noble achievements and conveys its heartfelt sympathy to the bereft family.

ROD BUILDING

(*From Page 9*)

than money can buy, and one you can be proud of. The cost of all supplies and tools used to build this rod plus your time and labor, totals less than the cost of the best rod money can buy. Upon gaining perfection in this work you will be able to sell your finished products, and also repair rods, thus realizing the cost of your original investment plus a nice profit.

Please hone the plane bitt once or as often as is necessary while you are planing the strips for the sections, so as to have very sharp edge. Otherwise the bitt will "bite" in nodes, tearing the edge. This would show on the glued section by leaving openings or seams that can not be filled.

When you have the rod ready for guides, mark the assembled rod at each guide. Fasten each one with tape on one foot. Sight through the guides, being certain that they are properly aligned. Wind the silk on the untaped foot of the guide, the length of the section. Remove tape from other feet of guide and finish.

Varnish rod with Coachman Copal varnish only, heating it for ten minutes in a double boiler to insure smooth flow. Two coats are sufficient.

I hope you build many fishing rods and the very best of luck.

I will gladly answer any questions or furnish any information concerning the names of firms from whom you may purchase the tools and supplies, upon receipt of a self-addressed stamped envelope.

Memorial

'Twas a sad day, that morning of Friday, August 5 when word flashed over the wire from Reading to Harrisburg telling of the sudden passing of State Fish Warden William E. Wounderly.

"Bill" as we here in the office liked to call him was a native of Reading and had served the county of Berks over a period of 26 years as its efficient and understanding warden. Bill was 71 years old, a native of Reading, he was a son of the late John and Amelia A. (Moyer) Wounderly and spent his boyhood on a farm near Lenhartsville.

THE PENNSYLVANIA ANGLER somberly pauses to pay its last signal salute to the passing of a grand man and public servant.

Brooke Focht, Outdoor Columnist has this to say about "Bill" Wounderly in the August 8 issue of the *Reading Eagle*.

"Berks County anglers lost their best friend last Friday when Fish Warden William E. Wounderly died suddenly at his home in Reading.

Bill, as he was known far and wide, almost daily was the target for undeserving criticism by local fishermen who blamed him for everything which went wrong in their favorite sport. Over the years, however, Bill learned to ignore most of this unjust criticism. Many is the time we have seen him get up in a sportsmen's meeting when almost everyone in the room was hostile. But before he sat down again, Bill had won most of the men over to his side by his homespun philosophy and shrewd knowledge of us Pennsylvania Dutchmen.

His popularity in this community was proven by the hundreds of persons who called at the funeral home to pay their last respects to the genial Wounderly both at the viewing and at yesterday's funeral. Never have we seen more and prettier floral tributes. Even more touching than the grief of Bill's immediate family were the tears which we saw coursing down the sun-burned cheeks of his deputy wardens and other sportsmen who attended the funeral. When men like those show their emotion, their feelings are deep.

Bill was a natural public relations man. Every Tuesday at almost the some hour, we could count on our telephone ringing and Bill's genial voice at the other end of the wire giving us some choice item for this column or some confidential tip which ofttimes led to an exclusive story for the paper. Bill never failed to lay the cards on the table with us from the very first day this column appeared in print—a cardinal rule in dealing with newspapermen.

No other living man knew every nook and cranny along Berks County's streams more intimately than Bill Wounderly. His friends among farmers, sportsmen and rural civic leaders were legion. Truly, Berks County has lost one of her most loveable characters."



William E. Wounderly

The Record "Muskie"

By Johnny Mock

The old saying, "There are bigger fish in the sea" seems to apply to fresh water just as well.

One after another, standing records have been broken. We can well remember when the largest wall-eyed pike was 16 pounds. Now, only a few years later, the record stands at 22¼ pounds.

Some years ago the musky record, in the middle fifty bracket, was held by a fish taken at Conneaut Lake. Pound by pound the world's record changed. Sometimes three or four pounds were added to the standing mark.

Last year the leading fish for this species was 64½ pounds taken at Favil Lake, Wis., on June 17.

Today, the record stands at 67½ pounds. The whopper was 60¼ inches long, with a girth of 33½ inches. That's a lot of musky for any angler to handle.

The fisherman credited with landing this monster is Cal Johnson, nationally-known outdoors writer. He conducts a rod and gun column for a Minneapolis paper as well as the fishing department of a national sportsmen's magazine.

In the boat, at the time the fish was fought and landed was Jack Connor, another well-known writer and hunting and fishing editor for the *Minneapolis Star*. Cal's son, Philip, acted as the guide.

The big fish had been spotted over a weed bed earlier in the season near Moccasin Lodge, popular fishing haunt on Lac Court O'Reilles, near Hayward, Wis.

THE WALLEYE

In spring, the fisherman's fancy turns to walleyes, especially those who appreciate excellent eating along with a highly enjoyable sport. While not on the spectacular side, the walleye is a solid denizen of the deep with sufficient attractions to boast a tremendous following among sporting anglers.

Probably because of its numerous needle-like teeth, the walleye is at times erroneously called a pike. This is a definite misnomer for the walleye belongs to the perch family and not the pike. Fortunately, the modern angler is also a willing reader who prefers to use the proper terminology, and each year finds increasing numbers calling this fish by its correct name —walleye.

The walleye is heavily fished for because of its high food value and willingness to strike nearly any lure. However, nature has equipped it to hold its own for the walleye is one of the most prolific spawners of all game fish. Some large females will produce as many as 300,000 eggs, each of which is comparatively small, or about 1/12 inch in diameter.

Especially in lakes, walleyes are schooling fish and once they are located, fine sport and finer eating are the rewards of a successful search.

NAMES . . . The walleye is blessed —or cursed—with an abundance of aliases, most of them colorfully descriptive. In Canada, especially the French-tinted areas, it is called dore —meaning "golden fish." In this country, most of its names inaccurately connect the walleye with the pike family, while some align it with the salmon group. The most common are: blue pike, dory, glasseye, marble-eye, gray pike, green pike, yellow pike, jack, jackfish, jack salmon, sauger, susquehanna salmon, walleye perch, walleye pickerel, walleye pike, whiteeye, yellow pickerel and yellow pike perch.

CHARACTERISTICS . . . While varying water conditions will affect the coloration of the walleye, generally it is dark olive mottled with yellow, and the blending of the two forms indistinct oblique bars on the back. The belly and lower fins tend to be pink while a characteristic black blotch usually is distinct on the membrane of the dorsal spines.

The walleye is easily distinguished from the pickerel, pike or muskellunge because it has both a front and rear dorsal while the members of the pike family have but one dorsal fin.

The walleye is a heavy nocturnal feeder, and as night approaches it will leave the deeper holes to feed around the shallows, particularly sand or gravel bars and the flats below dams or rapids.

RANGE . . . Originally, the walleye was found through eastern Canada to Alberta, and from Minnesota southward through the Mississippi Valley and Great Lakes basin. However, due to the fact that the walleye is so easily propagated by artificial methods, transplanting has brought this fine fish to nearly every state in the Union, with the exception of the far west and extreme south. It is particularly plentiful in the T.V.A. area.

Walleyes prefer moderately deep, clear, flowing waters with rock, gravel or sandy bottoms. Usually the best fishing will be found in those deeper holes where the swifter currents bring in food, or under falls and below rapids, as well as along reefs, ledges or along rocky shorelines.

SIZE . . . The world's record walleye was taken by Patrick E. Noon, using rod and reel, at Fort Erie, Ontario, Canada, on May 26, 1943, and weighed 22 pounds, 4 ounces. The country over, the average weight will approximate 2 to 5 pounds, but in certain sections, because of more favorable conditions, the average will run higher.

FLAVOR . . . Even the most particular gourmet would class the walleye as excellent eating. Since its nature causes it to seek out the cleaner, swifter waters the walleye is consistently delicious.

FOODS . . . Nearly anything that moves or flashes will attract the walleye, thus any small aquatic animal such as minnows of all kinds, frogs, crawfish, worms, etc., fall prey to these busy jaws.

LURES . . . Nearly any active underwater plug, particularly one designed to go deeper than average, which has a good wiggle at slow retrieve, will produce. In weedy territory, spoons and weedless pork-rind lures are better, while surface plugs will produce in late evening. After dark, any diving plug with a violent motion will bring in more walleyes than those with a fluid motion. Feathered minnows, small spoons, spinner combinations, large flies and bass bugs are favored by the fly fishermen.

METHODS . . . For bait casting, the same tackle used for bass fishing is ideal. That is, the light or medium action tubular steel rod such as the "Pal," lures in the ⅝ ounce—or under —class, lines testing 10 to 15 pounds and light action reels such as the "Pal." A 10 to 12-pound nylon leader will prevent lost fish from frayed lines, but even this should be changed whenever it shows signs of becoming weakened.

The most popular lures are River Runts, Go-Deepers, Punkinseeds, Vamps, Chuggers, Lucky 13's and Crazy Crawlers. For pork chunks or live bait, the Stanley Weedless Hook is an outstanding favorite.

For trolling, the same basic tackle is used except that heavier lines and



Renovo High School boys assisting in the stocking of trout on Youngwomans Creek

leaders together with a slightly heavier rod are favored.

Flycasters use the same basic tackle for walleyes that is used for bass fishing. When lighter lures are used, a bass-trout action is preferred; when the heavier lures are used, particularly in fishing against heavy current, the power-plus actions are better because of more backbone. Here again, nylon leaders of 8 to 10 pound test should be used—and watched, for weakening signs.

Still-fishing or live bait tactics require the same simple outfit that most of us learned to fish with. A cane pole, sinkers, bobber and a can of bait. A june-bug spinner with trailing nightcrawlers is deadly whether still fished in current or trolled behind a boat. At times, the walleye bites gently—so—the hook should not be set too quickly; give the quarry time to get the bait completely into its mouth.

Sometimes the walleye is confused with its closely related cousin, the SAUGER (*Stizostedion canadense*). The sauger is also called sand pike, gray pike, pike perch, pickering, horsefish and jack. Its eye is smaller and average weight is less than the walleye and its game qualities are noticeably inferior.

It may take considerable scouting around to locate "old marble eye"—but, once you find the spot which rates the walleye's favor for that particular day, you have uncovered a bonanza.

It is conceded that a lake walleye does not have the fight of a stream walleye which battles current nearly every second of its life. However, a walleye from any part of the country is consistently desired as a table fish more than the other species found in the same waters.



Mrs. Christianna Wissler, of Lancaster, and a nice catch of channel catfish which she took on the Lower Susquehanna River near Peach Bottom. Fish Warden Bob Greener, of Lancaster, is responsible for the snapshot.

CLEAN STREAMS

(*From Page 1*)

mands on Pennsylvania's water supply if we do our share in preventing pollution that destroys water's usefulness.

PROTECTION—THE CITIZEN'S TASK

Water becomes polluted in doing its many tasks, just as our hands and garments become soiled. We cleanse our hands and garments—and we should cleanse our water—which must be used over and over to provide our needs. We do not wash our hands or garments in the water we intend to drink. We should not pour our sewage and industrial wastes into the streams from which other communities must draw their supply for human and industrial use.

Today there is a fuller knowledge of the fact that water is wealth—and that wealth takes many forms. There is knowledge that pollution is a destructive enemy of that wealth—that in destroying a stream's beauty and recreation value, pollution robs us of a wealth as real as does its destruction in killing fish, corroding boilers, and eating away bridge foundations.

Pennsylvania has enacted laws designed to remedy the effects of stream pollution in the past, and to abate pollution at its source. The Sanitary Water Board is enforcing those laws. It has made strides which have given Pennsylvania leadership in eliminating pollution. In so doing, the Clean Streams program is guarding the wealth of every citizen of the Keystone State, for WATER IS WEALTH.

DEFIANCE OF THE PEOPLE

Two Pine Grove residents have paid $100 fines and costs on charges of interference with a fish warden in the performance of an official duty. More specifically the charge was that the defendants tried to take from the fish warden several fishermen he had in custody.

This case is important as a warning that interference with an officer of the law is serious business. When an effort is made to wrest from a policeman or other lawful officer men in his custody, the offense is not against the individual but against the Commonwealth,—against all people.

Such contempt for the law, of course, dare not go unnoticed or unpunished. To do so would be to encourage defiance and disrespect for law, a condition much too prevalent now. Editorial—Hbg. Evening News.

Calling All Outdoorsmen

By Jim Mitchell

I have spent a good many days this summer fishing with "purists" who frown at the mere suggestion of fishing with live bait. And, too, I have had a lot of fun "dunking" live bait with the minnow-frog-grasshopper clan trying to outwit finny gamesters.

Frankly (hold the brickbats, puristst) I happen to belong to the school of fishermen who like variety—both in fishing methods and species of fish. And I can see no need for the heated arguments that often develop between the purists and the bait dunkers. It's every man to his own liking, with no questions asked as far as I'm concerned.

This subject, however, has led to numerous discussions recently of zoning certain streams or lakes, with a part for the purist and a part for the bait fisherman. In some states certain streams, I believe, are closed to all types of fishing except fly fishing with artificial flies. I have never fished one of these spots.

But I do think the idea of zoning certain waters has merit—if for no other reason than to keep the purists and live bait fishermen out of arguing distance at least while they are fishing.

In checking the recent winners of a national fishing contest with 17 classifications, 13 prize fish (ranging from bass to trout) were taken on artificial lures while four winners caught their fish with live bait. So I see no reason for the purists to get alarmed: they're taking more than their share of the glory—and big fish.

Maybe all this arguing is what makes fishing such an interesting sport. If everyone liked the same species of fish, the same fishing method and use the same type of equipment it would create a serious problem. So don't worry about the current variety of styles and customs. It's all grand sport.

Trusted and . . . Tried, Maybe

"I understand," said the questioner, "that Mr. Smithers who was with your firm was a tried and trusted employee."

The banker looked at the visitor coldly. "Ah, yes," he said reminiscently, "he was trusted—and he will be tried, if we're fortunate enough to catch him."

Pennsylvania Fish Law Violations

Cases settled during the month of August 1949

ADAMS COUNTY

Gembe, Charles R., E. Berlin, Pa.. Fishing in a closed stream $25.00
Gochenour, C. E., E. Berlin, Pa. Fishing in a closed stream 25.00
Mauston, James W., 264 S. Washington St., Gettysburg, Pa. One undersized game fish 10.00
Zeigler, George E., E. Berlin, Pa. Fishing in a closed stream 25.00
Zeigler, Ralph, E. Berlin, Pa. Fishing in a closed stream 25.00

ALLEGHENY COUNTY

Black, Howard L., 424½ Pacific Ave., McKeesport, Pa. Operating motor boat without a license 5.00
Bruening, William M., 6344 Walnut St., Pittsburgh, Pa. Fished with bread at Spring Creek 20.00
Clary, Thomas Louis, 1307 Miss. Ave., Dormont, Pa. Fishing without a license 25.00
Confer, Walter S., Russelton, Pa. Fishing without a license 25.00
Daker, James, 675 Valley View Road, Mt. Lebanon, Pittsburgh, Pa. Fishing without a license 25.00
Dugan, James H., Jr., 103 Hodgson Ave., Ingram, 5, Pittsburgh, Pa. Fishing without a license 25.00
Fisher, Iva, Pittsburgh, Pa. Fishing without a license 25.00
Haberlain, James, R. D. # 2, Allison Park, Pa. Operating motor boat without a license 10.00
Haller, Martin, West View, Pittsburgh 29, Pa. Operating motor boat without a license 10.00
Hart, Marvin, 360 New York Ave., Clairton, Pa. Illegal operation of motor boat 10.00
Hensel, Samuel D., 903 Maple Ave., Turtle Creek, Pa. Operating a motor boat without a license 10.00
Keil, Albert J., 249 Southern Ave., Pittsburgh, Pa. Exceeding creel limit 10.00
Kijanka, Albin J., 2322 Sidney, Pittsburgh, Pa. Fishing without a license 25.00
Kunis, Albert E., 531 Pacific Ave., Forest Hills, Wilkinsburg, Pa. Operating a motor boat without a license 25.00
Lemmon, Grant J., Jr., Box 153, Perrysville, Pa. Illegal operation of motor boat 10.00
Mueller, William C., 2 Oak Crest Drive, Millvale 9, Pa. Operating motor boat without a license 25.00
Perry, William F., 327 Bothwell, Pittsburgh, Pa. Operating motor boat without a license 10.00
Ross, Robert E., Box 82, Gibsonia, Pa. Operating motor boat without a license 10.00
Savalle, Andy, 138 Boundry St., Clairton, Pa. Exceeding creel limit 50.00
Turner, James, 261 Cemetery St., Elizabeth, Pa. Operating motor boat without a license 10.00
Usher, Robert E., 3916 Lydle St., Hazelwood, Pa. Operating motor boat without a license 10.00
Weismiller, Leo, Mt. Oliver, Pittsburgh, Pa. Fishing without a license 25.00
Woleslagle, William F., 207 3rd Ave., Carnegie, Pa. Operating motor boat without a license 10.00
Woleslagle, Harry R., 53 Calhoun St., Mt. Oliver, Pittsburgh, Pa. Four undersized bass 40.00
Wood, James, 300 Marsonia, Pittsburgh, Pa. Exceeding creel limit .. 10.00
Woodruff, Richard C., 508 Yale Road, Pittsburgh, Pa. Operating motor boat without a license 10.00

ARMSTRONG COUNTY

DiPento, Frank A., R. D. # 1, East Brady, Pa. Operating motor boat without a license 10.00

BEAVER COUNTY

Corona, Thomas, 418 Duss St., Ambridge, Pa. Fishing without a license 25.00
Lintz, Joseph E., 135 Morado Dwelling, Beaver Falls, Pa. Fishing without a license 25.00

BERKS COUNTY

Stacherski, Leon, 915 Greenway Terrace, Reading, Pa. Using illegal devices 20.00

BLAIR COUNTY

Culp, Martin S., 1317 4th Ave., Duncansville, Pa. Fishing with bread in possession at Spring Creek 20.00
English, Mrs. Mary E., 804 3rd Ave., Altoona, Pa. Violation of the rules and regulations of Spring Creek .. 20.00
English, Robert L., 804 3rd Ave., Altoona, Pa. Lending badge and license 20.00
Frey, Bernard, 600 Third Ave., Duncansville, Pa. Operating motor boat without displaying license plates .. 5.00
Harf, E. G., Jr., 1012 Hiland Place, Altoona, Pa. Violation of the rules and regulations of Spring Creek .. 20.00
Hoover, Cletus E., Martinsburg, Pa. Using illegal devices 20.00
Newman, Taft H., 1904 10th Ave., Altoona, Pa. Violation of the rules and regulations of Spring Creek .. 20.00
Shaffer, George L., 803 6th Ave., Juniata, Altoona, Pa. Fishing without a license 25.00

BUCKS COUNTY

Godshall, Clarence I., Broad Street, Colmar, Pa. Using illegal devices .. 20.00

BUTLER COUNTY

Bahme, William H., 500 S. Main St., Zelienople, Pa. Illegal operation of motor boat 10.00
Fazzino, Sam., 398 W. Wayne St., Butler, Pa. Operating motor boat without displaying license plates 10.00

CAMBRIA COUNTY

Austin, Henry W., 948 Lloyd St., Nanty-Glo, Pa. Violation of the rules and regulations of Spring Creek 20.00
Boas, Urban, 401 Center St., Johnstown, Pa. Reckless operation of motor boat 10.00
Grembi, John J., Nanty Glo, Pa. Illegal operation of motor boat 10.00
Grembi, Premo, Nanty Glo, Pa. Illegal operation of motor boat 10.00
Griffith, John J., 318 Homer St., Johnstown, Pa. Violation of the rules and regulations of Spring Creek 20.00
McQuilken, William W., 1907 Menohan Blvd., Johnstown, Pa. Illegal operation of motor boat 10.00
Restic, Mike, Hastings, Pa. Violation of the rules and regulations of Spring Creek 20.00
Sharpe, Roy, 128 Market St., Johnstown, Pa. Violations of the rules and regulations of Spring Creek .. 20.00
Wiklewicz, Anthony J., 409 Main St., Gallitzin, Pa. Using illegal devices . 20.00
Yahner, John C., 202 Pershing St., Gallitzin, Pa. Violation of the rules and regulations of Spring Creek .. 20.00

CARBON COUNTY

Gray, Charles F., 119 E. Patterson St., Lansford, Pa. Illegal operation of motor boat 10.00
Kressly, Clifford, 38 E. Water St., Lansford, Pa. Illegal operation of motor boat 10.00

CENTRE COUNTY

Cunkle, Harry, 225 Front St., Philipsburg, Pa. Violation of the rules and regulations of Spring Creek 20.00
Gette, Claude A., Sr., 407 Pine St., Phillipsburg, Pa. Violation of the rules and regulations of Spring Creek 40.00
Hoffman, George L., 106 N. Front St., Phillipsburg, Pa. Violation of the rules and regulations of Spring Creek 20.00
Packer, Jack R., Blanchard, Pa. Thirteen undersized trout 130.00
Shawley, Donald C., Box 58, Milesburg, Pa. Violation of the rules and regulations of Spring Creek 20.00

CHESTER COUNTY

Gibson, Paul W., Parkesburg, Pa. Exceeding creel limit 20.00
Moyer, Leon L., Cochranville, Pa. Exceeding creel limit 20.00

CLEARFIELD COUNTY

Henry, Allen A., Dubois, Pa. Using illegal device 20.00
Hoover, Warren R., Houtzdale, Pa. Violation of the rules and regulations of Spring Creek 20.00
Houston, Abe P., R. D. # 1, Morrisdale, Pa. Two undersized pickerel . 20.00
Hutchins, Earl, R. D., Brockport, Pa. Three undersized trout 30.00
Rowles, Harry W., Olanta, Pa. Two undersized bass 20.00
Rowles, Paul R., Olanta, Pa. Two undersized bass 20.00

CLINTON COUNTY

Brickley, M. Stewart, 235 East Church St., Lock Haven, Pa. Operating moboat without displaying license plates 5.00

CUMBERLAND COUNTY

Dennison, Jack, W. Fairview, Pa. Illegal operation of motor boat 5.00

Reisinger, George I., 122 W. Green St., Mechanicsburg, Pa. Violation of the rules and regulations of Spring Creek 20.00

Woodring, Robert P., Lemoyne, Pa. Illegal operation of motor boat 5.00

DELAWARE COUNTY

Feaster, Lucy, 1812 W. Second St., Chester, Pa. Fishing without a license 25.00

Feaster, Oliver, 1812 W. Second St., Chester, Pa. Fishing without a license 25.00

Jolly, Floyd, 20th & Providence Rd., Chester, Pa. Transfering resident fishing license 25.00

Pekly, Frank M., 132 Corre Ave., Essington, Pa. Fishing without a license 25.00

ELK COUNTY

Mackey, Fred, Bennezette, Pa. Two undersized bass 20.00

Young, Sebastian, St. Marys, Pa. Illegal devices 20.00

ERIE COUNTY

Kolson, George B., R. F. D. # 5, Waterford, Pa. Lending a fishing license 25.00

McQuistion, Hal., 1225 Arlington Rd., Erie, Pa. Fishing without a license 25.00

FAYETTE COUNTY

Creci, Nero, P. O. Box 33, Fairbanks, Pa. Illegal operation of motor boat . 10.00

Glebis, Tony, R. D. # 2, Smithfield, Pa. Operating motor boat without a license 10.00

Hugh, Harold, 389 Braddock Ave., Uniontown, Pa. Fishing without a license 25.00

Stringer, Boyd, 134 Union St., California, Pa. Illegal operation of motor boat 10.00

HUNTINGDON COUNTY

Fetters, Earl, Six Mile Run, Pa. Fishing on Sunday without consent of landowner 25.00

Romig, Howard W., Burnt Cabins, Pa. Two brook trout in closed season 20.00

Weaverling, Harold, Six Mile Run, Pa. Fishing on Sunday without consent of land owner 25.00

Zelanko, Steve, Six Mile Run, Pa. Fishing on Sunday without consent of land owner 25.00

INDIANA COUNTY

Daffalo, Stephen W., Box 384, Homer City, Pa. One undersized brook trout 10.00

Diens, Mike, Waterman, Pa. Snagging fish 20.00

Diens, Mike, Waterman, Pa. Exceeding creel limit 40.00

Henderson, Robert T., Altman, Pa. One undersized bass 10.00

McCombs, John T., 328 Water St., Blairsville, Pa. Six undersized trout 60.00

McCombs, John T., 328 Water St., Blairsville, Pa. Illegal device 20.00

Ratay, Charles, R. D. # 1, Penn Run, Pa. Violation of the rules and regulations of Spring Creek 20.00

JEFFERSON COUNTY

Rockoski, John, Stump Creek, Pa. Violation of the rules and regulations of Spring Creek 20.00

JUNIATA COUNTY

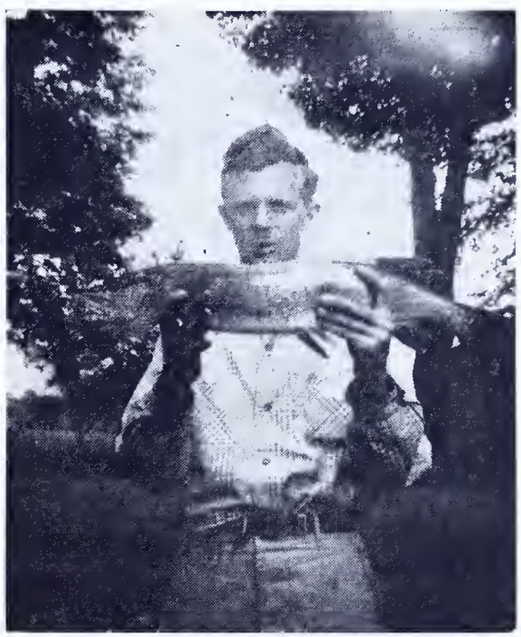
Bowersox, Harry O., Oakland Mills, Pa. Violation of the rules and regutions of Spring Creek 20.00

Yorks, G. W., Mifflintown, Pa. Violation of the rules and regulations of Spring Creek 20.00

LACKAWANNA COUNTY

Rinaldo, Joseph, 428 Breck St., Scranton, Pa. Illegal operation of motor boat 10.00

Zaydon, Joseph, 219 N. Main Ave., Scranton, Pa. Illegal operation of motor boat 25.00



Joe Byham, of R. D. No. 3, Saegerstown, and the fine Great Northern Pike which he caught in French Creek near Cambridge Springs. The fish measured 37" and weighed approximately 11 lbs. Joe, who hails from Venango, took the lunker on an artificial plug.

Zimmerman, Morris, 536 Moosic Rd., Old Forge, Pa. One undersized pickerel 10.00

LANCASTER COUNTY

Cooper, John, Salunga, Pa. Illegal operation of motor boat 10.00

Lehman, Lloyd, 253 N. Second St., Columbia, Pa. Illegal devises 20.00

LAWRENCE COUNTY

Lanza, Eugene, R. D. # 2, Ellwood City, Pa. Operating motor boat without displaying license plates .. 5.00

Sirimarco, Sam, 1122 Center Ave., Ellwood City, Pa. One undersized bass 10.00

LEBANON COUNTY

Albert, Charles R., Palmyra, Pa. Fishing in a closed stream 25.00

LEHIGH COUNTY

Knoppenberger, Robert C., 216 American St., Fullerton, Pa. Fishing with a borrowed license 25.00

Yonsetto, Peter, 1837 24th St., Catasauqua, Pa. Fishing without a license 25.00

LUZERNE COUNTY

Howe, Robert, Fox Hill, Wilkes-Barre, Pa. Interference with officers 100.00

Konnick, John, 624 N. Main St., Wilkes-Barre, Pa. One undersized bass 10.00

Laboty, Joseph A., 54 S. Main St., Pittston, Pa. Illegal operation of motor boat 5.00

Loborda, Joseph, 521 Perry St., Nanticoke, Pa. Fishing on Sunday without consent of owner 25.00

Stepanski, Benny, R. D. # 2, Wilkes-Barre, Pa. Operating motor boat without displaying license plates .. 10.00

Heiner, Marshall G., Muncy, Pa. Violation of rules and regulations of Spring Creek 20.00

Stanton, Robert L., R. D. # 3, Muncy, Pa. Operating motor boat without displaying license plates 5.00

McKEAN COUNTY

Felts, Lyle W., 3 Martin Ave., Bradford. Taking frogs without a license 25.00

Felts, Lyle W., 3 Martin Ave., Bradford, Pa. One frog in possession in closed season 10.00

Linblad, Gordon C., 25 Onefrie St., Bradford, Pa. Fishing without a license 25.00

McBride, Richard L., 1 Washington Place, Bradford, Pa. Taking frog without license 25.00

MERCER COUNTY

Sproul, Clifford M., 26 Franklin St., Greenville, Pa. Operating motor boat without displaying license plates .. 10.00

MIFFLIN COUNTY

Innis, Richard S., 412 W. 5th St., Lewistown, Pa. Operating motor boat without displaying license plates 5.00

MONTGOMERY COUNTY

Payne, Leo G., 521 York Rd., Abington, Pa. Violation of the rules and regulations of Spring Creek 20.00

Root, Chester, 454 Old Elm St., Conshohocken, Pa. Exceeding creel limit 10.00

Stewart, Tena, 210 River Road, Pottstown, Pa. Lending a fishing license . 25.00

Whitsell, J. Robert, 315 Sterigere St., Norristown, Pa. Operating motor boat without a license 10.00

NORTHAMPTON COUNTY

Groff, Warren G., R. D. # 1, Bethlehem, Pa. Operating motor boat without displaying license plates 10.00

Heckman, Earl, 2710 Freemansburg Ave., Easton, Pa., One undersized bass 10.00

NORTHUMBERLAND COUNTY

Surzinski, Joseph A., 217 Melrose St., Keiser, Pa. Two undersized bass .. 20.00

PERRY COUNTY

Baker, Arthur R., R. D. # 1, Duncannon, Pa. Violation of the rules and regulations of Spring Creek 20.00

PHILADELPHIA COUNTY

Bond, Carl, 6319 Baynton St., Phila-

delphia, Pa. Fishing without a license 25.00
Cassidy, John J., 121 Reed St., Philadelphia, Pa. Lending a fishing license 25.00
Coleman, Ruby, 1605 W. Diamond St., Philadelphia, Pa. Fishing without a license 25.00
Dankanich, John, 2830 Snyder Ave., Philadelphia, Pa. Fishing without a license 25.00
Heintz, Fred, 3122 Wellington St., Philadelphia, Pa. Fishing without a license 25.00
Hoffman, Harry, M & Bristol Sts., Philadelphia, Pa. Fishing without a license 25.00
Hoffman, Robert, 731 Sauger St., Philadelphia, Pa. Lending a fishing license 25.00
James, Charles, 1312 S. 47th St., Philadelphia, Pa. Fishing without a license 25.00
Lafayette, Mrs. James, 1312 S. 47th St., Philadelphia, Pa. Lending a fishing license 25.00
Palchcik, George, 2829 Jackson St., Philadelphia 45, Pa. Fishing without a license 25.00
Pellegrino, Vincent, 2428 E. Fourth St., Philadelphia, Pa. Fishing without a license 25.00
Sadowy, Joseph, 136 E. Moreland St., Philadelphia, Pa. Lending a fishing license 25.00
Sandroni, Alfred, 1545 S. Stanley St., Philadelphia 46, Pa. Fishing without a license 25.00

PIKE COUNTY

Guccini, Naldo, Greentown, R. D., Pa. Using dealers license tags on rented boats for pleasure 10.00
Spatz, Jay E., Camp Wallenpaupack, Greentown, Pa. Operating motor boat with wrong license tags 10.00

SCHUYLKILL COUNTY

Calvin, Joe, Barnesville, Pa. Illegal operation of motor boat 10.00
Curvey, Frederick, 122 Schuylkill Ave., Tamaqua, Pa. Illegal operation of motor boat 10.00
Fiddler, Robert, Summit Station, Pa. One undersized pickerel 10.00
Galinus, John, 234 W. Mt. Vernon St., Shenandoah, Pa. Illegal operation of motor boat 10.00
Gaydos, Joseph F., 274 3rd St., Coaldale, Pa. Illegal operation of motor boat 10.00
Gaydos, Stephen, 124 Ridge St., Coaldale, Pa. Illegal operation of motor boat 10.00
Kunigonis, John A., 418 E. Market St., Mahanoy City, Pa. Illegal operation of motor boat 10.00
Mitchell, Edward, 1 N. Line St., Fraekville, Pa. Illegal operation of motor boat 10.00
Mitchell, Joseph, 1 N. Line St., Frackville, Pa. Illegal operation of motor boat 10.00
Norbert, Narciss R., 134 Swatara Rd., Shenandoah Hts., Shenandoah, Pa. Illegal device 20.00
Stickler, Raymond, 123 Schuylkill Ave., Tamaqua, Pa. Illegal operation of motor boat 10.00

SOMERSET COUNTY

Fortney, Irvin M., Confluence, Pa. Illegal operation of motor boat 10.00
Gochnaur, Forrest, 1117 Graham Ave., Windber, Pa. One frog in closed season 10.00
Koval, Charles, 6th St., Box 356, Cairn Brook, Pa. Illegal device 20.00
Lynch, Bernard, 705 Mine 37, Windber, Pa. Two undersized bass 20.00
Manges, Alvin, Central City, Pa. Illegal operation of motor boat 10.00
Miller, Clarence P., R. D. # 2, Rockwood, Pa. Fishing without a license 25.00
Smail, John, 765 Mine 37, Windber, Pa. Fishing without a license 25.00

TIOGA COUNTY

Cole, Raymond R., Watrous, Pa. Illegal device 20.00
Losinger, Russell M., R. F. D. # 4, Wellsboro, Pa. Forty-seven trout in closed season 470.00
Losinger, Russell M., R. F. D. # 4, Wellsboro, Pa. Fifteen undersized trout 150.00
Losinger, Russell M., R. F. D. # 4, Wellsboro, Pa. Fishing Cushman Branch of Slate Run 100.00
Starkey, Frank W., Middlebury Center, Pa. Five undersized trout 50.00



Mike Orlando, of New Castle, and the fine rainbow trout which he caught on the Slippery Rock Creek near Rose Point. The trout measured 23" long and weighed 4½ lbs.

WARREN COUNTY

Pittman, P. H., 3 Biddle St., Warren, Pa. Operating motor boat without a license 10.00

WASHINGTON COUNTY

Cushey, David C., Box 96, Finleyville, Pa. Exceeding creel limit 20.00
Cushey, David C., Box 96, Finleyville, Pa. Violation of the rules and regulations of the Pennsylvania Fish Commission 20.00
Dudgeon, Elmer, R. D. # 1, Belle Vernon, Pa. Eight undersized bass . 80.00
Dudgeon, Elmer, R. D. # 1, Belle Vernon, Pa. Exceeding creel limit . 20.00
Guder, Paul E., Box 254, Speers Hill, Charleroi, Pa. Illegal operation of motor boat 10.00
Homa, Henry, 84 Allen Plan, Donora, Pa. Exceeding creel limit 10.00
Stralaski, Alice, Prospect Ave., Charleroi, Pa. Fishing without a license . 25.00
Walton, Hassel, Box 354, Lawrence, Pa. Violation of frog law 25.00

WAYNE COUNTY

Bertree, Frank, 416 Chestnut Ave., Hawley, Pa. Two undersized bass . 20.00

WESTMORELAND COUNTY

Carota, Emello, 311 Miller St., Latrobe, Pa. Failure to sign license 25.00
Daniel, Gordon, 211 Bessemer Ave., E. Pittsburgh, Pa. Fishing without a license 25.00
Maleski, Melvin, West Newton, R. D. Pa. Illegal device 20.00
McGrogan, Charles, West Newton, R. D., Pa. Illegal device 20.00
Nicewonger, Robert L., Greensburg, Pa. Fishing in hatchery waters .. 100.00
Slilasy, Cliff, West Newton, R. D., Pa. Illegal device 20.00
Winebrenner, William, Bradenville, Pa. Exceeding creel limit 80.00

YORK COUNTY

Rudacille, John, R. D. 8, York, Pa. Illegal device 20.00
Shrader, Allen J., 513 E. Philadelphia St., York, Pa. Operating motor boat without license plates 50.00
Smith, H. D., Glen Rock, Pa. Exceeding creel limit 30.00

OUT OF STATE

Watley, Lucinda, 2008 Nicholas St., Atlanta, Ga. Fishing without a license 25.00
Watley, Rufus, 2008 Nicholas St., Atlanta, Ga. Fishing without a license 25.00
Amey, Joseph, R. D. # 2, Sienezione, Ga. Fishing without a license 25.00
Deters, Paul H., Soldier, Kentucky. Violation of the rules and regulations of Spring Creek 20.00
Bowser, Charles D., Selbysport Twp., Md. Fishing without a license 25.00
Joy, Walter E., 67 Glenwood Ave., East Orange, N. J. Fishing without a license 25.00
Kluss, Walter A., 277 High St., Newark, N. J. Fishing without a license . 25.00
Kolanka, Joseph, 306 Cyril Ave., Fairlawn, N. J. Operating motor boat without license plates 10.00
McDonald, Clair, R. D. # 1, Ceres, N. Y. Ten trout in closed season .. 100.00
McDonald, Clair, R. D. # 1, Ceres, N. Y. Fishing without a license .. 25.00
Cullen, G. A., 106 Jefferson St., Endicott, N. Y. Allowing motor boat to be operated without displaying license plates 5.00
Fasolino, Anthony, 4312 52nd St., Woodside, Long Island. Altering non-resident fishing license 25.00
Frye, Guthrie H., P. O. Box 206, Radio City, New York. Fishing without a license 25.00
Severance, C. M., 75 East St., One-

onta, N. Y. Operating motor boat without a license 10.00
Siegenthaler, Walter R., 2116 Novarre Rd., S. W., Canton, Ohio. One undersized bass 10.00
Carter, Ira H., Hubbard, Ohio. Operating motor boat without a license . 10.00
Dyer, R. Dwight, R. D. 2, Lowell, Ohio. Fishing without a license .. 25.00
Brady, Clifford H., 1515 Maple St., Wickliffe, Ohio. Operating motor boat without a license 5.00
Reed, Cecil, Bruston, Tennessee. Fishing without a license 25.00
Reed, Cecil, Bruston, Tennessee. Illegal fish in possession 10.00

Them's Mighty Fine Eel!

Fron State Fish Warden Harry Z. Cole of Norristown we learn of the catching of some nighty large eel from Penn Manor Lake. The Warden certifies that Elmer Fluck, a canal attendant at Point Pleasant, has caught wo exceptionally large eels, the one measured 43" long, 10" girth and weighed 6 lbs., while the second measured 46" long with 10" girth and weighed 6 lbs. 10 ozs. These eels were taken on July 9 and July 30, 1949.

Lands 34-Inch Carp

Believed to be the largest fish caught this season in Berks waters is the 34-inch carp landed last week by Herbert Anderson, of 1 Warren St., Glenside, in the Tulpehocken Creek near the Keystone Bungalow.

Anderson caught the monster after a 20-minute struggle. It bit on a hook baited with cornmeal mush. The fish weighed more than 20 pounds.

The latest thing in men's clothing . . . women.

THE SPORTSMEN'S CORNER

Abundance of Small Bass Observed in North Branch of Susquehanna That Means Good Fishing in the Future

By Dick Fortney

A new crop of bass is growing in the popular north branch of the Susquehanna River. Fishermen who have visited the stream this year have been impressed by one fact: Not in years has there been so large a number of bass less than the legal limit of nine inches.

It's disappointing to an angler, of course, to catch only small bass. But the disappointment is eased to some measure if the angler realizes that the small fish he sees this year mean catchable bass in the next couple of years.

Important, too, is the fact that what bass of keepable size are being caught are, as a rule, fat as butter.

Fears Allayed Now

In the early part of this season anglers who visited the river were dismayed at the lack of fish. They began to wonder if something—like the pollution that has ruined the west branch of the river—might have occurred. But the angling has improved since early July, and the abundance of small bass indicates the water still is free of pollution.

C. R. Buller, chief fish culturist of the Pennsylvania Fish Commission, told this writer one day that nowhere in Pennsylvania do bass grow as rapidly and maintain such good condition as they do in the north branch of the Susquehanna. So obvious is this condition, in fact, that the commission is making a study of the river to discover, if it can, just what causes this splendid situation.

Rapid Growth Observed

By studying scales from bass, fish scientists are able to estimate accurately the age of a bass. The rapid growth of bass in the north branch has been proved by this means.

The obvious conclusion is that the small bass which are being seen by fishermen this year will be of legal size next year or the following.

Because of drought conditions, the north branch has been in better condition than usual this summer. Right now it is pretty bad with algae (which anglers call moss) which is floating in the more quiet pools and which "decorate" bait and lure and line and reel as well.

But the bass, even though they may run small, are active and frequently may be seen feeding on the surface of the pools.

Plenty of Food Too

The good condition of the fish is explained by an apparent abundance of natural food for the fish.

The riffles are well stocked with helgrammites, and the pools contain minnows and crawfish. Stonecatfish also are plentiful.

Spinners and midget plugs have been taking some good fish from the river in recent weeks. Bait fishermen are the ones who have been annoyed the most by the undersized bass.

And the river is getting a normally hard working-over. Boat owners report a heavy demand for their craft, campers are frequent along the banks of the stream, and lots of parties of two to four anglers are driving goodly distances to the river for a day of fishing.



"The fish is delicious, dear—but I wish you had removed the hooks."

There are two kinds of men who never amount to much, those who cannot do what they are told, and those who can do nothing else.

Provide For Waste Disposal or Quit Mining

Five more coal operators have been ordered to cease at once the discharge of mine drainage from their mines to the streams. The order requires them to discontinue any possible pollution until they have received a permit for their operation. The Clean Streams law stipulates that it is unlawful to open or reopen any mine without a permit.

The operators receiving the order are Elliott Coal Co., Philipsburg, strip mine in Decatur Township, Clearfield Co.; John J. Cable Coal Co., Holsopple, strip mine in Jenner Township, Somerset Co.; Blair Bloom, Martin Beam and Vern Bloom, deep mine in Brady Township, Clearfield Co.; Dahlin Brothers Coal Mining Co., strip mine, Decatur Township, Clearfield Co.; The West End Coal Co., West End, deep mine in Greentree Borough or Greentree Township, Allegheny Co.

The Muskrat Lodge

By Robert Leo Smith

In November the streamside is desolate and silent. The heavy frosts and the cold winds have turned the lush thickets into brown, withered vegetation. The insects are gone, and the scores of singing birds and the deeped-voiced frogs. But standing conspicuously in the still, cold water are the muskrat lodges, the winter homes of our most abundant streamside animal.

The muskrat lodge is a conical affair, three or four feet high and several feet broader at the base. It may be built in a foot or more of water or in a relatively dry spot on a mass of flags or willow sprouts. If the muskrats select the former site, they gather dead sedges, cattails, arums and other vegetation for the foundation. Down through this sturdy, water-soaked base, the muskrats prepare a plunge hole to the water below. By this route they enter and leave the lodge. If they build their house on a rather dry place, the muskrats must dig an underground tunnel from the bottom of the lodge to the water.

As the lodge grows the muskrats keep pulling some of the material away to make good living quarters within. To complete the house they plaster the coarse, twiggy wall with mud and water-soaked vegetation.

Inside the lodge is a dry, single chamber, occasionally with several alcoves, that serves as sleeping and feeding quarters for a muskrat family. Here these little animals store roots and willow tips for winter use. If they wish a change in diet, the muskrats leave the lodge by the plunge hole and swim under the water and ice to feed on the succulent roots of arum, iris and sedges.



In those areas where the streamsides are relatively steep, the muskrats prefer to dig their quarters in the bank. The entrance is always under or close to the water level but the chamber is constructed well above the high water line.

In the spring when the muskrat families abandon the lodges the females take them over for a safe retreat in which to give birth to their young.

Paper Mill Abates Pollution

With the New York and Pennsylvania Co. engaged in an anti-pollution program involving the expenditure of about one and one-half million dollars at its sprawling paper mill at Johnsonburg, great improvement is expected soon to be seen in the Clarion River which flows through the famous Cook Forest, a highly developed recreational area. Since the Clarion empties into the Allegheny River from which Pittsburgh gets its water supply, reduction of pollution from the paper mill will have beneficial results for that city.

There are about 20 million gallons of water used daily at the mill in the manufacture of paper. In the manufacturing process four major types of wastes are produced. One of them is black ash from the soda mill, wastes resulting from the deinking of used paper, which in addition to wood pulp it utilized in making the new product. Under construction at the present time are two different types of systems to treat portions of the four major wastes produced at the mill. A settling tank 40 feet x 170 feet to have a capacity of 400,000 gallons is being built, patterned after a similar tank constructed some time ago for experimental purposes and which is now in use. A third tank will be built later. These tanks will provide treatment for about 13 million gallons of wastes daily. The clarified water will be discharged to the river and the sludge will be pumped 1,700 feet to a 60-acre lagoon on a mountain top to which the waste water from the deinking process is also pumped and where that water is clarified through sedimentation and aeration.

More than three million gallons daily of waste waters from the paper making machines, showers, etc., will be treated in a 60-foot diameter cylindrical tank with mechanical sludge removal equipment which is now being built.

In one process of pulp manufacture, between 15 and 20 tons of black ash is produced, all of which formerly went to the river. This pollution is now eliminated entirely, the waste being discharged to a basin which was recently constructed. The company also eliminated pollution from black sulphite liquor several years ago when it began the preparation of that waste for use as a road binder, for which it is now being sold. When there is a surplus it is pumped to a series of lagoons. The Clarion River is one of the waterways where complete treatment of sewage and industrial wastes is necessary, still more work must be done at the paper mill in pollution control.

New Play

George (at football game): "That fellow out there playing center will be our best man before the season is over."

Jeannette: "Oh, George, this is so sudden."

A

BIGGER AND GREATER

"PENNSYLVANIA WEEK"

OCTOBER 17-24, 1949

"FOR THE LORD DOES NOT DEDUCT FROM MAN'S

ALLOTTED TIME—

THE HOURS HE SPENDS 'OUT FISH'N'!"

CLEAN SPORTSMANSHIP—GOOD FELLOWSHIP—HONEST CITIZENSHIP

Fishermen Everywhere are Planning to Make This Year's

"PENNSYLVANIA WEEK"

The BEST Ever!

More Industry

More Jobs

More Income

You Too, Can Help Celebrate

"PENNSYLVANIA WEEK"

OCTOBER 17-24

1949

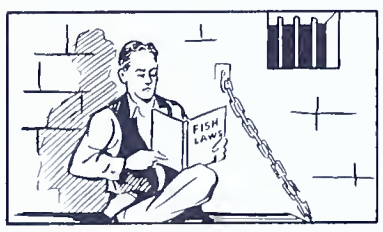
According to the Law...



Washing your automobile in any stream, pond or lake of the state is considered an act of pollution and is punishable by law.

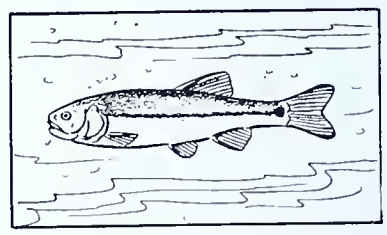
Any fish which is accidently foul hooked must be returned to the water. $20.00 fine.





To possess a net larger than 4 feet square or 4 feet in diameter a permit is required. $100.00 to $200.00 and 30 days in jail.

Chubs are a specie of minnow but under the law are classified as game fish and therefore can not be taken by a minnow seine. They may be used as bait if taken with hook and line. 15 is the daily creel limit.



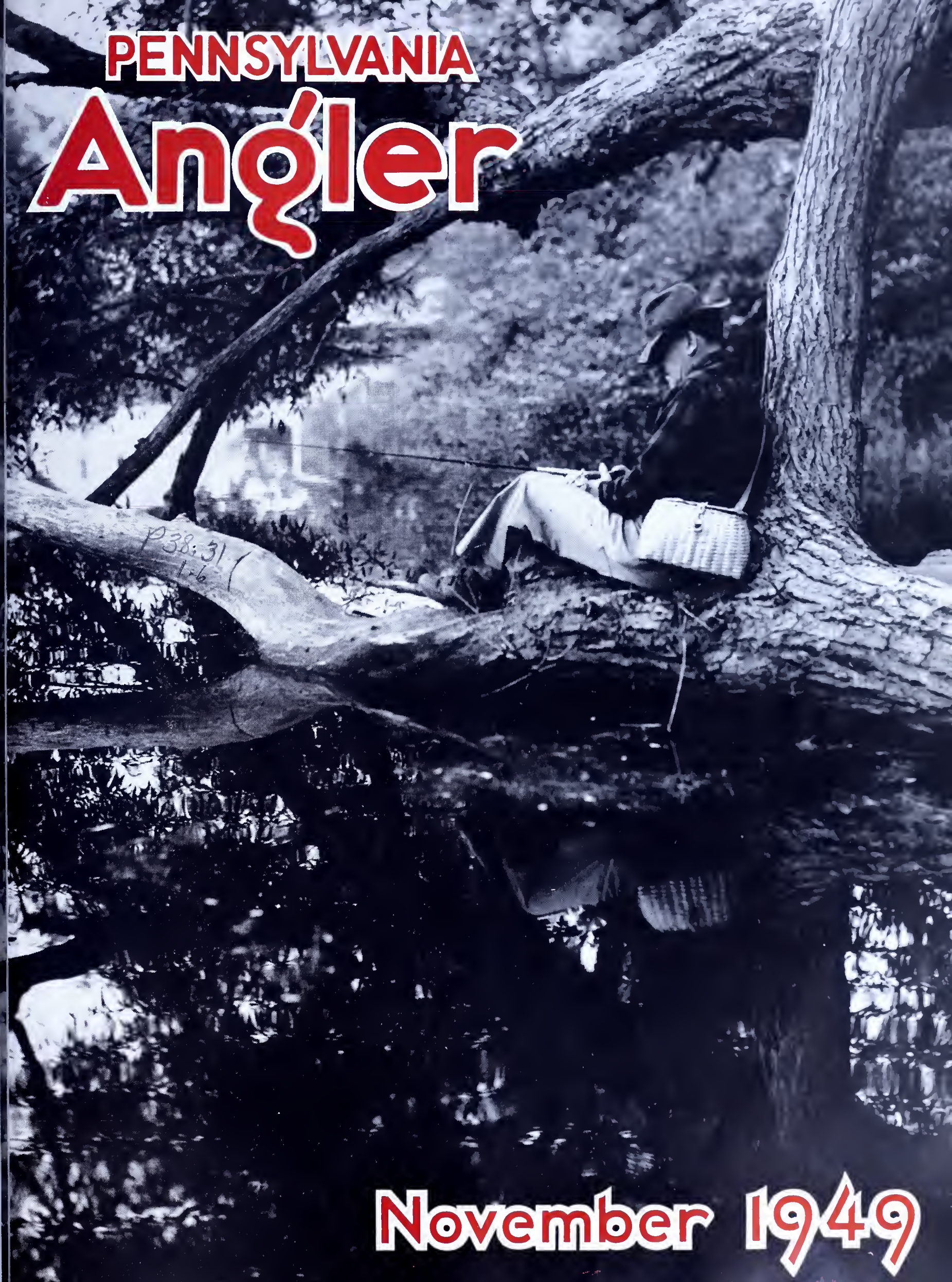


The penalty is $25.00 for fishing without the license certificate on or about your person. The same is true for failure to have the button displayed on an outer garment while fishing.

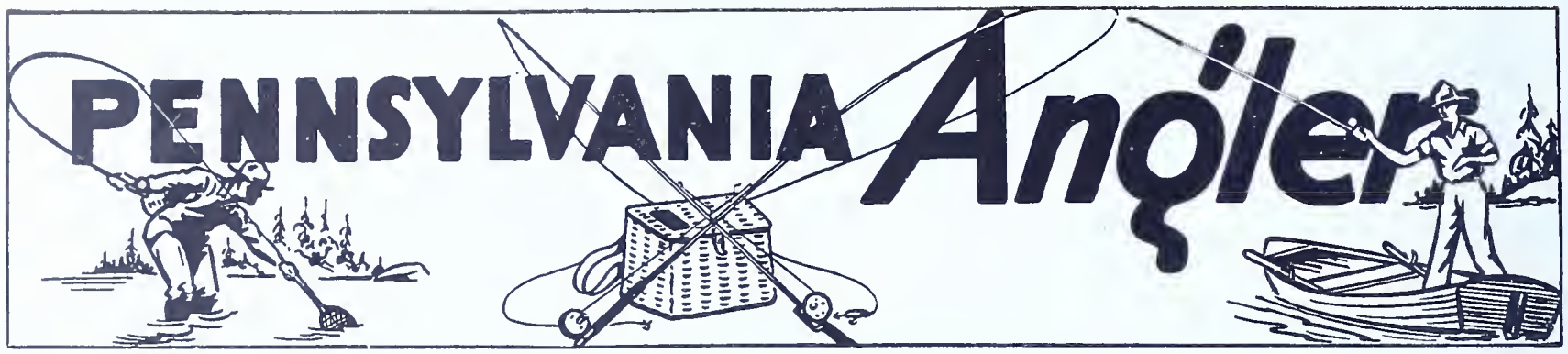
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PENNSYLVANIA
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HON. JAMES H. DUFF, Governor

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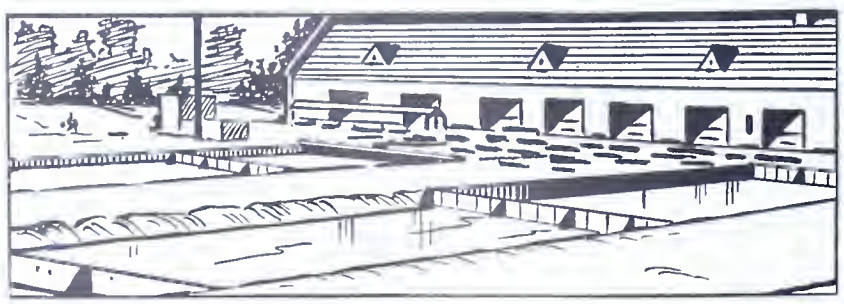
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FISH COMMISSION
HARRISBURG, PA.



The Angler

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Fisherman's Dreams
(Photo by Herbert C. Lanks)

HOLIDAY FOR STRINGS

I'm weary of work with its grist and its grime,
I want to get out with my rod and my line,
I'm musty with "problems," I'm sick to the brain;
I've got to get out in the wind and the rain.

I'm tired of studying man-made mistakes
In a world that refuses to put on the brakes.
And I loathe the whole mess that we humans have made.
Proudly building a world without heavenly aid.

When I stop in my tracks and take time out to think,
I can see my world tottering flush on the brink
Of a pit that is bubbling with tears of despair
Because men cannot prosper when love is not there.

So let me get out in the wind and the rain
Where nature can heal my dispirited brain,
Where the stars are my guide, and the sun is my friend.
And the clouds and the rainbow make everything blend.

I must out in the open, I can't stand it here
Where the news and the radio all create fear.
Let me out in my woods where the whippoorwill sings,
Where there's quiet and peace when the angelus rings.

It's only a holiday, that's all I ask
From the hurry and worry surrounding my task.
Just a few quiet days in the great open spaces
Midst the smell of the pines and all it embraces.

It's only a holiday, lest I forget
That God's on His throne watching over us yet.
I don't want to forget that He made all things good
From the air that I breathe to my health and my food.

I don't want to forget that the robin can sing,
That the fishes still nibble and the bees still can sting.
I don't want to forget the tall pines in the night
As they brush away clouds to make stars shine more bright.

So please let me go to my stream for a spell
Where my dear ones and I can get out of the shell
Of a civilization that don't like a rod
And is spoiling the ground that my fathers have trod.

Just give me some time so I daily can hear
The clear voice of my father who will always be near
To interpret creation, the meaning of life,
The glory of peace and the folly of strife.

And then when my brain has been washed by the rain
And my skin has been tanned by the sun's healing stain
Oh, then let me back, there's a job to be done,
And the Master I serve can turn work into fun.

—UNKNOWN



Like all gulls the ring-billed is a graceful and strong flyer. Like the larger herring gull it is a scavenger, but both often pick up small first.

They Don't Wait Till Friday

By N. R. CASILLO

"That's a lousy trick," declared Burr, frankly dismayed.

"I'd like to get my hands on the gimlet brained idiot who did it," thundered Bill.

My sentiments were similar when the second pair of birds erratically wheeled past our boat. They were common terns, each fast to either end of the same length of stout fishing line. Not tied, mind you, but hooked by the mouth. Some ghoulish jokester doubtlessly dropped the line with its two hooks baited with minnows, and the terns did the rest.

"Let's see if we can spot that so-and-so," ominously growled Bill as he suddenly stood up in the boat to survey the sizable cluster of craft centering on that particular part of Presque Isle Bay. It was June the 5th.

"Aw, it serves those fish thieves right," railed one of three occupants of a boat anchored scarcely more than a score feet away.

Bill glared at the diminutive man propped up in the bow. "*You* look like the type that'd pull a trick like that," menacingly asserted Bill.

The little man said no more. Bill weighs over 200. I discreetly rowed from the hot spot.

After settling down on our new location, Bill turned to me and bluntly asked if "those things" were fish thieves.

"Hardly," I replied. "Sure, they catch a lot of minnows," I admitted, "but as for competing with man, there's nothing to it."

"But, there are birds that do get away with a good many sizable and valuable fish aren't there?" This from Burr.

"You surely haven't forgotten the fishhawk that followed us around up in Canada, have you?" Bill cut in.

"I won't ever forget that gal," reminisced Burr as a grin of pleasure bespread his face.

They were alluding to a resident of our favorite Canadian bass lake. Whenever she spotted us out on the lake she hung around the vicinity of our boat to pick up the occasional lake suckers which we caught and obligingly socked on the head with a monkey wrench before tossing them out to her. However, when we were unsuccessful she would show us up with one of her spectacular plunges. She never failed to emerge from the sheet of spray she kicked up, with a sizable perch, bass or even northern pike clutched in her efficient talons. On more than one occasion she made us really envious by making off with a real fine prize. Burr has always contended that we played no small part that summer in raising her family. Yet, for all its skill as a fisherman, the fishhawk or osprey can be dismissed as an important fish destroyer. There simply aren't enough of them.

Indeed, under natural conditions it is doubtful if any of our fish-eating birds or those which include fish in their diet, are destructive to an economic or even competitive degree. On the other hand, no animal, and that includes bird and beast, can be as destructive as a kingfisher which has taken to hanging around trout rearing ponds or along those containing suitable sized fry of any other species. Under such circumstances the most reliable corrective is a well placed charge of birdshot.

For an interval of ten days we had the opportunity to watch a kingfisher fishing. Several times daily it repaired to the same general location where it executed some unusual angling tactics. Unable to locate its prey from the usual streamside perch, it would fly out over the water to the same area some three-score feet offshore. There at a height of twenty or so feet it would momentarily hover as it endeavored to spot its prey. At the propitious instant it would dive and hit the surface with a resounding smack. Invariably, it winged off with its victims with the usual familiar clatter, landing on one of three conveniently located snags to finish off its catch. To me the stilted chatter of the kingfisher is a kind of hallmark of the streams I fish. Most streams, as every fisherman knows, have their quota of these familiar birds.

Well, during the aforementioned ten-day interval I had plenty of opportunity for observation, my binoculars bringing the bird so close as to make some of its larger catches frequently distinguishable. It invariably swallowed its smaller victims at once. Of the thirty-six successful sallies observed, an even half-dozen of the larger fish were positively identified. All of them were shiners. Scientific studies of the kingfisher's diet have disclosed comparatively few valuable fish. Since the kinigfisher has priority rights it is probably entitled to the few which it doubtlessly picks up. The consensus of opinion seems to be that under undisturbed conditions the harm done to valuable species is practically negligible. In fact, some observers claim that the kingfisher actually performs a service in the natural propagation of trout by destroying many spawn-eating minnows.*

The great blue heron is chiefly a fish eater, but as in the case of the kingfisher, the countryside is not overrun with these solitary and efficient avian anglers. Successive visits to the heron rookery near Pennline, Ohio in the Pymatuning Area, proved beyond the remotest doubt that the heron is a topnotch provider for its voracious offspring.

A visit to the noisy as well as noisome nursery when the young were old enough to take their nourishment in large chunks, showed the ground to be littered with an amazing number of fish and no few aquatic forms of other kinds. Several largemouth bass up to fourteen-inches in length and a magnificent, practically intact seven-

* Hint to bird watchers: Rather than walking interminably to compile a list of birds, try observing a single species over a period of days. Your observations will be not only interesting and frequently amusing, but infinitely more useful as well.



(Photo by Michigan Dept. of Conservation)
A young bald eagle shortly after leaving its nest. This eagle is a splendid fisherman, but prefers dead fish washed up on the shore. It often hijacks the industrious osprey. The white head and tail of this species is not acquired until the bird is three years old.



The common tern is an agile fisherman, avidly picking up surfacing small fish. Often in the company of gulls it is readily identified by its much smaller size and forked tail.

een-inch brown trout were included n the debris. The presence of the atter was really puzzling since the iearest trout stream of which we have ny knowledge is approximately seven-een miles away. But, one of my com-panions succinctly expressed it with: 'If that's too far for them to negotiate, hen, they probably know about a rout supply that's nearer than we uspect." And, I often find myself vondering about it.

The large number of carp was both urprising and gratifying although it osed a question. Were the scores of odies littering the ground rejected as ndesirable or was it because they epresented a food surplus? I'm in-lined toward the latter. Singularly, at io time have we ever found any evi-lence of frogs or other amphibians. This despite the fact that amphibians orm a considerable part of the long-egged fisherman's diet. Incidentally, arying numbers of turkey vultures kim the treetops above the nursery lmost constantly, presumably on the ookout for whatever food they can ick up. One afternoon we counted ifty-two of the naked neck scavengers.

Until investigated, the three most amiliar mergansers, namely, Ameri-an, redbreasted and hooded, were ynonymous with fish destroyers. And nsofar as it concerns the quantity of ish, consumed, my first impression still tands. As a matter of fact, the hooked ill, the sawtooth processes along the dges of the upper mandible as well as its ease of manipulation through the water all point to its efficiency and lexterity as a fisherman. Here again, nowever, we find that in most instances t confines its fare to the coarser fishes such as suckers, chubs, shiners and allies. They also consume consider-able quantities of mussels, snails, cray-ishes and even some vegetable matter. This is especially true of the hooded form. However, there is no fast and hard rule indicating that they stead-fastly stick to the innocuous bill of fare. The fact that their flesh is rankly fishy precludes their reduction by gunners.

In all Canadian lakes wherein the northern pike occurs, the tables are often turned and the quarry becomes the aggressor. Two years ago a mer-ganser and her brood of eleven were regular visitors to the spot where we deposited our fish offal. One day the entire camp personnel watched the family as it essayed the crossing of a pike infested bay. The mother sub-merged until only her head and a small part of the neck were visible. The young clustered closely about and over her in a compact mass. However, despite the close formation the danger-ous adventure resulted in the loss of two ducklings. Regardless of the panic and fear which the attacks must have invoked, the little family clustered all the closer and thereby prevented more fatalities.

Many years ago I attempted to locate the nest of a barred owl. Its location was suspected to be in a heavy growth of white pines growing in the midst of a copse of well-nigh impenetrable bushes and smaller trees. The hoot of the old owl was like a sort of a dis-embodied voice apparently coming from nowhere in particular and yet, seemingly everywhere. I endlessly and fruitlessly tramped the banks and en-virons of the river bordering the wood-land.

One late afternoon I was cautiously slipping along the edge of a narrow in-let which penetrated some distance into the woods. The now familiar call was still some distance ahead. A quick movement at my left arrested my atten-tion. To my surprise it was a barred owl. I slowly turned for a better view and my amazement grew at what I saw. Even as the hollow hoot of the call I was stalking smote my ears, the bird that had attracted my attention floated from the slight elevation on which it was poised and momentarily hovered over the water. Suddenly it swooped downward practically to the surface. There it deftly stretched one foot down into the water and brought out a spasmodically struggling bull-head some eight or ten inches long. A fishing owl! It was something new to me. Still clinging to its prey with the foot which had seized it the owl winged off in the direction of the reg-ularly recurring calls. I followed in its wake as well as I could. It may be added that I found the nest with its pair of fuzzy youngsters. Singularly, it was on the ground at the gnarled base of a pine. Strewn about it were the bones of many fish as well as several disiccated carcasses.

Since then I have learned that the barred owl shares its angling skill with its larger relative the great horned owl. The owls obviously have one ad-vantage over diurnal fishermen and that is they can fish at dusk or in dark woodland waters, their prey being at a distinct disadvantage. It may be safely surmised that in both species angling is but an incidental activity.

The little green heron loves fish and is just as adept at catching them as its great blue cousin. Moreover, this skill is shared by the black-crowned night heron and the bittern; nor should we forget the latter's diminutive relative, the least bittern. These birds are not in any sense numerous. However, most any unpolluted stream can boast of a pair or two of green herons. This un-gainly looking little chap feeds along the margins of ponds and streams, slowly and deliberately, almost casu-ally walking along as though out for a stroll. But when within striking dis-tance of the hapless tadpoles, minnow or crayfish, it strikes out with light-ning rapidity.

The black-crowned night heron is a nocturnal feeder, still-hunting and stalking small fish and other aquatic forms. This attractive heron is dis-tributed over the entire Common-wealth, occurring in most marshy situations adjacent to water. On Sep-tember the 14th of last year while slowly paddling a canoe around a small wooded island immediately southwest of the Pymatuning Fish Hatchery, we put out 152 night herons. Why they were perched in the treetops is some-thing we cannot explain, but as we gradually progressed about the islet they would wingoff in varying num-bers. Since it was too early for the southern migration any explanation for the unusual concentration is merely conjectural. Immature forms greatly outnumbered the adults.

During the nesting season most members of the heron family are more or less gregarious. This admirable trait, however, is not shared by the bittern or thunder-pumper, bogbird, bum-cluck, stake-driver, etc., as this expert fisherman is variously and colloquially called. It does most of its foraging for a variety of aquatic animals under the cover of darkness. Most any sizable bog or marsh has its quota of at least one or two of these birds.

Bitterns are masters of the art of camouflage, taking full advantage of

(*Turn to Page* 21)



The herring gull does not acquire its fine pearl-gray, white and black plumage until its third year. This bird is but a few months old.

AUTUMN ANGLING

By DON SHINER

Try one more day of angling before winter sets in; it can be one of the most delightful outings of the year.

The quest for game is the upper most thought in the sportsman's mind during the autumn and little consideration is given to fall angling. This may be due because he has grown weary of the sport since he indulged in angling the four months of warm weather or his size catches has taken a set back in quantity. Whatever reason it may be, angling in the Autumn generally plays second fiddle to hunting.

However, not every Autumn is suited for spending a few days along the stream. Frosty weather, snow and ice, often play their part in preventing the angler from seeking the finned creatures. Chilled water and air often penetrate him when wading the low tantic acid tinted waters during the Fall months.

However, this time of year finds bass and pickerel feeding at their best, as well as walleyes and perch, and not forgetting the much over-looked pan fish. The chilled water seems to create a greater desire for food in the mentioned fish and they really become bold and reckless in their quest for tasty food morsels.

The frost causes the leaves to turn the beautiful colors and later fall to form a blanket on the ground. It is not uncommon to see the stream's bottom nearly covered with leaves as well as many leaves swirling around on the surface. When the leaves become water soaked they give off a tea colored solution which is tantic acid. This gives the water a dirty tint, it does not harm the fish in this diluted quantity, but rather conditions them, making their bodies more firm and less sluggish than during the warm water months.

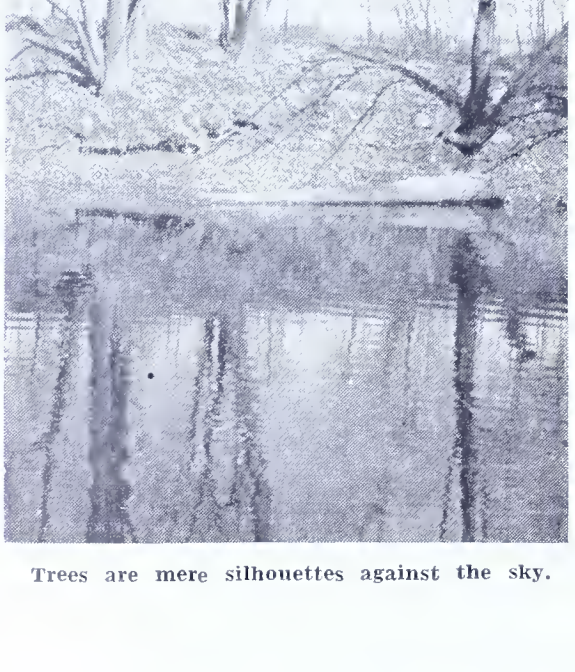
The trees, since they lost their cover of leaves, are mere sticks silhouetted against the sky. The angler is much more visible to the fish since there is little foliage to blend his person with, hence more caution is needed to conceal his movements when angling at this time of year.

Clothes colored closely to the brown leaves, trees and dirt banks are far better than the summer attire of forest green. Longer leaders and of a lighter weight as well as smaller lures add greatly in filling the creel.

While bait will take fish nearly every season of the year, for those who prefer artificials, perhaps, the spinner and fly combination works best of all lures. Streamers of the variety which represents minnows are also good fish getters, not forgetting the wide assortment of spoons, and wobblers of the many type of finishes available.

For spinner and fly combinations, any of the popular and old stand by patterns are good fall lures. Parma Belle, Professor, Black Gnat, Lord Baltimore, Grizzly King and of course the Royal Coachman and Silver Doctor are flies which take many bass and pickerel when attached to a spinner. The finish on the spinner does have a great deal to do with filling the creel. Large silver or nickel finish spinners almost scare fish, in low clear water. Its bright flashes are not as tempting as the flashes of gold, brass or copper finishes. However, the different finishes of spinners also represents quite well different species of minnows, such as nickel or silver imitate the glitter of chub minnows and gold or brass gives the appearance of shiners and pan fish. The angler will do well to select a spinner which will give the color and appearance of the minnows found in the vicinity when fishing.

Streamer flies of the variety which imitate a minnow are good fall lures. Black Ghost, Bartlett's Special, Grand Laker, Sanborn, Supervisor and Mickey Fin are all excellent streamer patterns. Streamer flies for bass and pickerel are slowly becoming widely practiced, and for the fly rod enthusiast, it is as an affective way of taking these fish as well as walleyes and perch instead of on the standard casting rod and tackle.



Trees are mere silhouettes against the sky.

Small plugs are good at this time of year. Both surface and sinking plugs are deadly on bass and pickerel. The tendency towards a canabilistic nature of other species of fish can be understood when viewing the fact that large blue gills, perch and rock bass are often taken on the same small varieties of plugs.

As in the Spring, it is not an uncommon sight to see an angler in the Fall, cramped around a tiny fire thawing the chill from himself caused by the frosty air and water. This is an excellent time to prepare your last outdoor meal before winter sets in. Few anglers seem to take time to prepare a meal out of doors, but it can add a charm to the trip which can not be compared to a stop-over at some resort or hotel. While the modern conveniences are not at hand and some of us are quite awkward at handling a skillet, a nourishing meal can be made without much fuss or preparation.

For those who wish a warm outdoor snack, a fish stew can be easily made and is quite delicious to even the most discriminating connoisseur. If the angler was fortunate enough to have captured some bass or pickerel he can quickly make a delicious fish stew. The fish should be cleaned and salted, then boiled for a period of five minutes. The water is then poured off, fish cut into small inch square pieces and the backbone and ribs removed. After the fish is placed in a pan, milk, salt and pepper is added, then heat thoroughly. The milk can generally be secured from a nearby farm house or a small can of evaporated milk, or milk in a dehydrated form can be used. This stew, eaten with crackers, is quite tasty and simple for the outdoor man to prepare.

While this stew is being prepared, often, small potatoes can be placed in the hot bed of coals of the fire and quickly baked.

Another item that can be prepared quite easily is a new quick cooking rice now found on the market and requires about a minute of boiling. It is quite easy to prepare and requires no stirring to prevent the rice from becoming burned or scorched. A little of this rice goes a long way, hence, little is needed for a meal. A cup of this rice can be added to a cup of boiling water and allowed to boil one minute: a half tablespoon of salt is then added and then the rice is removed from the fire, covered and allowed to stand for about ten minutes. This makes generally a three cup serving.

These items produce a tasty and nourishing meal outdoors and does not over burden the angler in transporting them. It is always good to build the fire close to the waters edge in the



Seeing an angler cramped over a small fire is as common during the Fall months as it is during the early spring.

Fall so that the fire and hot coals can be quickly extinguished after use. The many dry leaves lying on the ground are a great fire hazard, and when preparing a meal in the outdoors, all necessary fire prevention is needed. A most devastating destruction can be the result of a single spark amid dry leaves in the Fall. Millions of miles of forests and an unestimated amount of wild life is destroyed each year. While not all is the direct result of carelessness and negligence on the part of sportsmen, much of this waste can be overcome and combatted by a little precaution.

Remember when cleaning the fish for a stew, certain parts of the fish's anatomy often is good bait for the after meal angling. The white belly skin of both pike and perch is a good substitute for pork-rind and is a good lure fished with or without a spinner. Even the eyes of the fish can be used. Imbedded or impelled on a small hook, they are good bait for pan fish.

The last Fall angling trip helps too, to keep the important fact in mind that many parts of the fowls and animals shot during the Autumn hunting season can be used as fly tying material throughout the winter months.

Hair from squirrel's tail, natural or dyed, along with fox, skunk, and deer tails are used with great success in the making of streamer flies and some patterns of wet flies. One deer tail (from either a doe or buck) will provide enough hair for dozens of streamer flies and bucktails, as well as hair bass bugs. It is wise to gather a number of deer tails, some can be dyed a variety of colors—red, green, orange, yellow, blue, etc.

The beautiful barbed feathers of the wood duck, along with the tiny specked wood duck and mallard breast feathers are excellent feathers for use in constructing flies, especially some dry fly patterns.

Likewise, some of the pheasant's speckled feathers should be secured since they can be used as wing material on bass bugs and fan wing flies.

Not forgetting the common rabbit or cotton tail, his fur is used on many favorite trout fly patterns. Rabbit's hair is spun or twisted on a waxed thread and makes excellent fuzzy fly bodies. The famous Cahills, Gold Ribbed Hare's ear fly and others are proven fish-getters all over Pennsylvania and the East.

If by chance you came across a porcupine, his quills can be secured and used as body material on flies calling for a quill body and a porcupine quill makes a very buoyant dry fly, not omitting the affectiveness of this fly on trout while angling in fast waters.

Aside from making the last catch of game fish, angling in the Fall keeps fresh in our minds, the necessity of saving these materials and using them to our advantage in the construction of lures for the next coming angling season.



Soon the favorite streams will have their banks covered with a thick blanket of snow.

Go Fishing In The Fall

The brilliant colors which are abundant everywhere give a new perspective to Northern waters. Anticipation runs high among eager fishermen who know that Fall has once again ushered in some of the best fishing of the year.

There are many good reasons why fishing is at its best in the Autumn months. Fall brings cooler weather, colder water. Fish begin to shake off the dull lethargy of Summer and they are psychologically inclined to strike after gaily colored lures. Natural food isn't as abundant as it was during the hot days. The smaller fish which once provided food have grown to be too large, too wary. Live baits, lures, and surface baits now provide attraction and all can be used to bring in a scrapper.

Bass, muskellunge, pike, lake trout, and pan fish are ready to be taken in most areas. In the West the famed rainbow trout provides hard and fast sport.

Bass now are hiding in the shallows and can be taken with meadow frogs. The weedy places are the best bets. Lily pads, spots about old trees, rocks in shallow water and places where gravel of the bank comes down into the water also hide bass.

In some waters, especially those with a black muddy bottom, bass will not rise to the surface until after dark and places such as this can then be a fisherman's paradise. Besides frogs, flies, pork rind, spinners, bass bugs, minnows and hellgrammites can be used satisfactorily. The best times for bass fishing is from daylight until ten a.m., and from three p.m., until dark.

The muskellunge, unlike the black bass which travel in pairs, is solitary in his habits. He can be found under the edge of lily pads, along the side of logs, or under trees that have fallen into the water.

Muskies like frogs, the larger the better. Five to seven-inch minnows can also trap him, and a silver plated spoon with red and white feathers or pork rind will prove effective for the purists. Daylight until nine a.m., and four-thirty p.m., until dark are Muskie fishing hours—O.B.C.A.

George W. Forrest

in the York Gazette and Daily

Several gentlemen were observing the rising carp in Kiawanis Lake near the point where the little stream feeds into the lake. Dimples and swirls showed where the feeding, playful fish were cruising. At times one of the larger carp flapped and slapped his great tail on the surface. Ambling along the lake, the two gentlemen came upon a lad fishing off the spillway at the lower end.

"How's luck?" amiably inquired one of the lads. "No good!" replied the youthful angler keeping his eyes glued on the rod tip.

"Don't believe you're fishing in the right spot, son," observed the other. "They're jumpin' all over the lake up there." He indicated the exact spot where they saw rising fish some moments ago.

Apparently the boy had already been steeped in the lore of "angling hindsight" regarding the "you should have been here yesterday." That they were biting right then and there was indicated by a sudden, starting wheeeeeeee of the reel. Snatching up the rod, the lad set the hook with a great deal of energy. Some of those carp over at the lake put young arms to a pretty fair test of strength. In this case it was a struggle, for that fish was big. You could tell it by the alarming arch of the rod.

Coaches, in any sport, are more addicted to biting their fingernails than the participants simply because the participants haven't much time to do other than bite their tongues, grit their teeth and hold on. The contestant held on, fortunately the carp held on and was eventually heaved to the grass aflopping.

Now even coaches admit a good play, applaud a good score when they see one. This wasn't an exception. That fish was big . . . plenty big! Acclaim was unanimous.

"Say, young fellow," chirped one of the enthused coaches, "why don't you take that big baby along to the newspaper office and get your picture taken with the prize!"

"Take him in to get our pictures taken?" bitterly panted the boy. "Why, I can't even take him along home. The first and only time I catch a big fish out here and it hasta be when I'm playing hooky!"

Kill Less—Catch More

WHY NOT TAKE HER ALONG?

By KEITH C. SCHUYLER

They say that marriage is a partnership, but most fellows feel that this axiom doesn't apply when it comes to their hunting and fishing. If they take the little woman along at all, they usually do it grudgingly.

The picture of a woman in the outdoor sports scene is usually associated with hooks in skirts, grimacing glances at fish worms, lines in trees, rocking boats and other uncomplimentary expressions of the female inability to keep up with her husband. Men, I say it isn't fair.

Ever since my little woman and I went into partnership, we've had some mighty good times together out yonder. Except for time out to raise a couple kids, we team up quite often with rod or gun. It used to be that I just took her along for the self satisfaction I got out of seeing tangible results of my teaching. Now, it's a case of my trying to keep up with the competition.

For instance, take the time we went out for pickerel. It was the second time that she had used a casting rod. Not ten minutes from the beach on a mountain pond in Pennsylvania, she got her first strike.

It was easy to see that it was no minnow that she had tangled with, and I was about three times as excited as she as I rummaged in the boat for the gaff. After the pickerel found that he couldn't saw the line off on the keel of the boat, he finally came up for a look. Before he could think up any new tricks, I bounced him in the boat.

That pickerel was twenty-three inches long. Not a record, but a bigger one than I had taken up to that time. It just happened that later in the day I hooked into the largest pickerel I had ever taken: one just an inch longer than that caught by my wife. Believe me, though, I got a much greater kick out of the one she caught.

One of the greatest thrills I have ever had fishing occurred the first time I attempted to teach my wife how to handle a dry fly. The trout were not hitting too well, but I finally saw one raise in a long pool of slowly moving water. I showed her the spot and left her on her own while I moved on up the creek.

Before I had gone very far, I heard her squeal and turned to watch her play and net an eleven inch native brook trout. They don't get much bigger in that particular stream, and to me that was one of the biggest, prettiest and fattest brookies I have ever seen come from that creek.

Or the second time we went bass fishing together. We started out at a deep hole beneath a railroad trestle. When we arrived, we found several other fellows there who claimed that they had been working the spot for two hours without a strike. With them was a fellow who I knew had fished the stream since a kid, and it didn't look encouraging.

The water was slightly colored, and we had brought some hellgrammites along for bait. I showed her how to hook the "devil" under his collar and placed her at the lower end of the long hole after telling her to fish toward a big rock in the middle of the creek.

I went on down below around the bend to a "better" spot. Not five minutes later, I heard quite a commotion up the creek. The fellows who had been fishing the spot previously mentioned were yelling all sorts of advice to someone; then I heard the little woman shouting for me.

But, by the time I could make it around the bend and come panting up to the scene of the excitement, there she was holding up a small-mouth bass that weighed just two and one-half pounds. About as big as they come in that small stream, that was the heaviest, the fightin'est,—oh well. Later in the day she caught another smaller bass and a water dog. My score was zero.

The most fun we've ever had fishing was on a vacation trip to the St. Lawrence River a couple summers ago. When we arrived, it seemed that everyone else was leaving. The wind was blowing a gale, and the river was the highest it had been in years.

We were both pretty much discouraged, but we decided to try it out since we had previously arranged for a cabin up the river from Gananoque on the Canadian side. The wind calmed somewhat after a fruitless day of fishing although the waves still kept the boat rolling on foot high swells. Then we found the bass that everyone had told us were not biting.

For five days, we caught and released bass two pounds and downward until we lost count. We had saved the largest to freeze and take home with us and finally had our day's legal transporting limit of two and one-half to four pound small-mouths in the food locker in Gananoque. Then we started trolling for pike.

The long fellows were not too cooperative, although my betterhalf managed one of over five pounds that measured nearly thirty-four inches.

While trolling for pike, we had an odd, but pleasurable experience when





we each hooked into one of the huge channel cats. She snagged into the first one, and we had an exciting ten minutes speculating as to what it could be while the rod and line took a terrific beating from the heavy runs of the catfish.

We were both amazed and somewhat disappointed when we finally discovered what had taken the red-eye wiggler, but were none the less pleased with the fight the big fish had given. It weighed seven and three-quarter pounds.

That same day, and in the same manner, I caught one just one pound heavier although it was an inch less in length than the first cat. Both were nearly thirty inches long. My pride and joy had a great time bringing in one on her fly rod that weighed five pounds. Incidentally, the fly rods were all that we used on the bass.

Her luck at hunting has been somewhat less encouraging than her fishing attempts. She almost killed her first deer on her first trip out, but lost it to a pot hunter after she had badly crippled it. Small game haven't been so elusive, although that season of the year gives her less time from her household duties to be with me afield.

My only additional expense, aside from double purchases of hunting and fishing equipment, has been for freckle cream. The wind brings out the spots that worry her much more than snakes, broken bones or wet feet. My insistence that freckles are a sign of beauty have little effect other than to increase the sales of cream that is supposed to remove the spots.

I've had my troubles. Like the time she got lost on the mountain while deer hunting four months before the last baby was born. While I yelled myself hoarse and burned up all my energy running up and down the mountain, she calmly took out the compass I had provided and "found" herself.

I discovered her back at the car quite rested and with fresh make-up on ready to go again. Whether the young doctor who was with us was as disturbed as I over the experience, I don't know. But, later that afternoon, he missed the biggest buck he had ever seen, five shots going straight away.

We can't get out as often since there are two children. But, I try to manage as many trips with her as possible. She is no "anchor" man in our crowd; she keeps up with the best of them and always takes her turn when we drive for deer. If it is strictly a stag trip, she waits without complaining until the trip when she can go along.

Dances and parties have considerably less pain for me since my wife and I have rounded our partnership out completely. We have found that there is fun in everything—when you do it together.

Stream Clearance!

Order requiring the abatement of pollution of the public waterways or the submission of plans for the complete treatment of wastes have been issued in three additional cases by the Sanitary Water Board.

One of the orders went to the city of Reading and relates to wastes from the garbage reduction plant. The Board recently ordered the city to rehabilitate, enlarge and improve its existing sewage treatment works to provide for complete treatment of the sewage and that the work be completed and the improved plant be placed in operation on or before January 1, 1951

The other orders went to the Mifflin County Packing Co., Brown Township, Mifflin Co., operator of a cannery located along Tea Creek, and to the Ideal Farms, Wetmore Township, McKean Co., located along Glad Run.

The Board also accepted as compliance with its orders the installations for waste treatment made by the Stackpole Carbon Co., St. Marys, Elk Co., and by the Susquehanna Chemical Corp., Lafayette Township, McKean Co.

The best live baits for pickerel include minnows, frogs, and crawfish. Pickerel also regard mice, bugs, and large insects as real delicacies.

"For anglers and meek, quiet-spirited men are free from those high, those restless thoughts, which corrode the sweets of life . . . nay, let me tell you, there be many that have forty times our estates, that would give the greater part of it to be healthful and cheerful like us, who, with the expense of little money, have eat and drunk, and laughed, and sang, and slept securely, and rose next day and cast away care, and sung, and laughed, and angled again; which are blessings rich men cannot purchase with all their money."—Izaak Walton.



The wives of three Game Commission Officials proudly exhibit their catch at the Paradise during the 1949 season. Mrs Alice Reeder in the center topped the honors with a 20" brown trout. Mrs. Ruth Heydrich is on the left and Mrs. Marty Batcheler, wife of the Game Commission's Popular Photographer is to the right.

Lesser Fishes of Pennsylvania—

The Yellow Perch

By BILL WOLF

(Editorial note: Trout, bass, wall-eyed pike and similar major game fish hold the spotlight in Pennsylvania's angling interest, but there are many lesser kinds which provide good angling or are of especial importance as bait or food for the larger fish. This is one of a series of articles dealing with these minor fishes of the State.)

SOME years back, another angler and I were plug-casting for bass in one of Pennsylvania's mountain lakes, and having a tough time interesting any fish, when we noticed a curious thing. Every time we retrieved an underwater plug slowly, a school of inquisitive yellow perch would follow it right up to the boat. They made no attempt to strike the plug, but tagged along behind it like a band of nosy schoolboys.

We could see them clearly in the relatively shallow water and were amazed by the number of them. At times, as many as twenty yellow perch would trail after the plug. They ranged in size from callow youths no more than a few inches long to nice adult fish of a foot in length.

Since they showed so much curiosity, whereas the bass in the lake showed none, we decided to reward them with something more to their taste than a large plug. We are very kind to fish that way, being perfectly willing to treat them to a fly, streamer or bait on a nice sharp hook any time the fish display a willingness to take such dainties.

So we changed to fly rods and small streamers. Letting them sink almost to the bottom, we worked them in short jerks and the yellow perch responded happily, tumbling over each other in their anxiety to grab the fascinating bits of fur, feathers and steel.

We caught quite a few of them, and kept several apiece because their flesh is unusually good, ranking next to their larger cousins, the wall-eyed pike. More important, the dull day was turned into an interesting one because a nice-sized perch caught on a light fly rod in cold mountain water is not to be despised as a fighter. We scarcely even missed the hard-to-please bass.

I wonder how often the same fish has saved the day for other anglers. I know that it has done so for me more than once and I have a great admiration for this handsome fish with its dark and bright yellow markings.

Its scientific name is *Perca flavescens*, and yellow perch is its common name which has been approved by the Outdoor Writers' Association of America; but it has many aliases, including yellow ned (by which it is commonly known in neighboring New Jersey), racoon perch, American perch, red perch, ringed perch, and striped perch. Most of these are southern names for fish. It is the only fish commonly encountered in Pennsylvania which is entitled to the name "perch." The white perch, for instance, belongs to an entirely different family, and I do not believe that the small troutperch is often seen here except in the extreme northern part of the State. The log perch is just a large darter.

Whenever you see a diagrammatic sketch used to illustrate the different parts of a fish, chances are one hundred to one that the yellow perch has served as the model because it is common and well-known and also one of the most nearly perfect fish for showing the various fins, arrangement of scales and parts of the body. It is usually referred to as a "handsome" fish, with which description most persons agree after seeing for the first time its distinctive markings and bright colors.

I'm almost afraid to mention that the yellow perch can run up to four pounds in weight because fish of that size certainly aren't caught with any regularity in Pennsylvania. However, the perch will reach that weight. The world record is 4 younds, 3½ ounces, and was set away back in 1865 when a Dr. C. C. Abbot hauled a monster yellow perch from the lake at Bordentown, N. J.

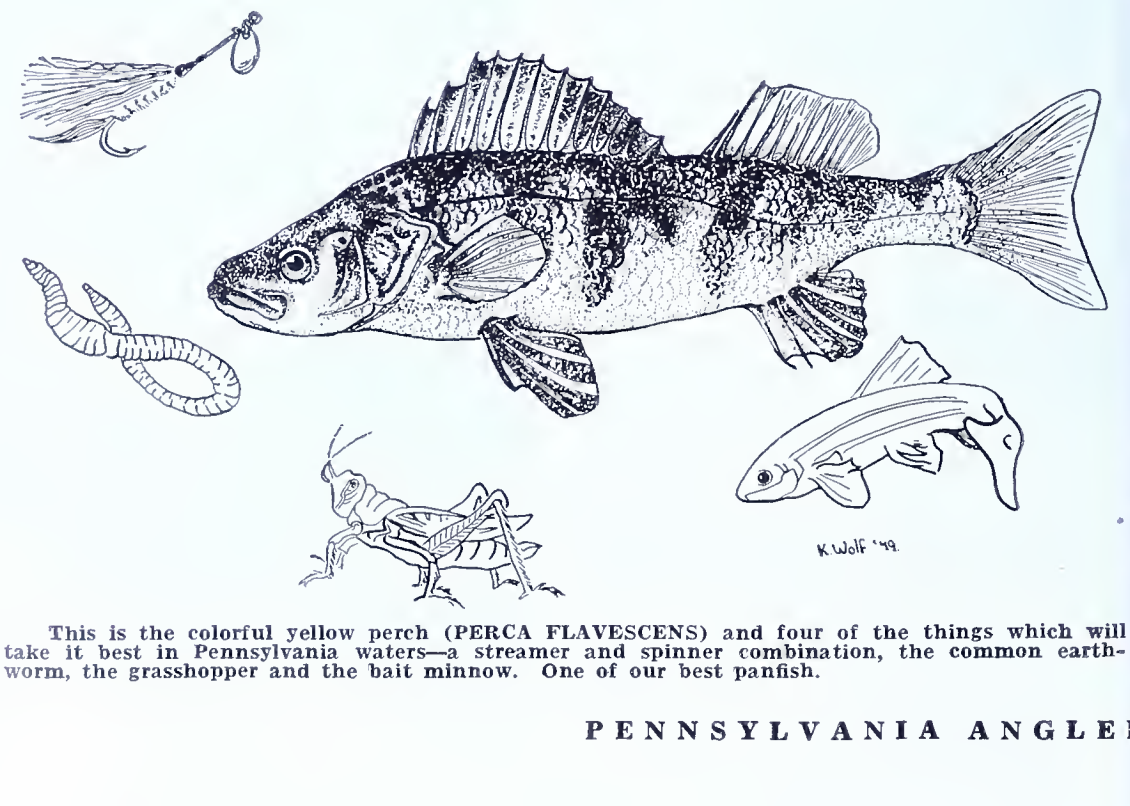
A fish from 12 to 15 inches in length and weighing around a pound is a large perch for the Keystone State. In many of the State's lakes, the yellow perch are too numerous and seldom get more than six or eight inches long. For example, back in the days when Lake Harmony near Albrightsville was known as Big Pond, its yellow perch reached a respectable size; but there are too many in it now and only an occasional large one is caught. However, it is possible to catch scores of small ones almost any day on the lake.

Although principally a lake and pond fish here, they are sometimes found in streams and rivers where, I believe, they develop into even better fighters on the line than their easier-living brothers and sisters in lakes. Nearly all lakes containing bass also hold yellow perch, and I always make a point of doing some fishing for them when on a bass trip. At Stillwater Lake, for instance, I always put out a streamer and spinner combination to troll while rowing from one part of the pond to another. This way, I often pick up yellow perch or pickerel.

Even if perch weren't stocked artificially, they would be a widespread species because of their spawning methods. Early in the spring, the female lays her eggs in the form of adhesive bands which sink to the bottom and cling to sticks and weeds. Various wading and diving aquatic birds pick up some of these ribbons of spawn and carry them to other waters accidentally on their feet or bodies.

Yellow perch have a lot to recommend them to the angler. There is no month in the year when they are not

(*Turn to Page* 20)



This is the colorful yellow perch (PERCA FLAVESCENS) and four of the things which will take it best in Pennsylvania waters—a streamer and spinner combination, the common earthworm, the grasshopper and the bait minnow. One of our best panfish.

THE NORTHERN PIKE



Joe Strubel of Clarks Summit, Pa. and the exceptionally nice black bass he caught at Glenburn Pond in Lackawanna County last September. The fish weighed 6¾ lbs. and measured 23¾" long.

Around the unhandsome head of the northern pike rage a great many controversial storms. Some say it is an unsavory character, fit only to be exterminated because of its depredations against other fish....Others praise this fish highly because of its hearty strike, acrobatic showmanship and rugged fighting ability.

Most veteran anglers admit its short- but admire the northern pike for its characteristic gameness. It will seize nearly any type of lure, natural or artificial, and being gifted with both strength and speed, a thrilling battle usually results.

Another characteristic of the northern pike is its unpredictable antics. For instance, many unseasoned anglers return home with a badly bent or completely broken rod to show that a northern pike has a fiendish penchant for dashing under the boat just when the angler thinks it is completely played out.

In addition, the northern pike is a source of tall tales too numerous to mention except for one which will end all tall tales and prove that the modern day fisherman has no corner on this market.

Research into the history of the northern pike reveals several often quoted records showing that European pike reach weights exceeding 100 pounds....In fact, one report mentions a northern pike taken in Germany in 1479, with a ring attached bearing the date 1230.

This would seemingly establish the age of this fish at the astounding total of 249 years; and the estimated weight was 350 pounds. That is one for the records—ancient records, that is!

NAMES...Probably the most common nickname for this fish is Great Northern Pike. However, all authorities unquestionably agree that the "great" is superfluous and the name northern pike covers nicely. Other colloquial names are: Grass Pike, Jack Pike, Pike, Pickerel, Snake, Jackfish, Lake Pickerel and Northerner.

CHARACTERISTICS...The northern pike, together with the muskellunge and pickerel, is a member of the pike family. All three of these fish are easily distinguished by the one single dorsal fin which is located far back on the body, very near the tail.

So similar in offhand appearance are these three fish, many anglers have difficulty distinguishing them apart. While experienced anglers can tell them quickly by body markings and general shape, here is a certain method of identification.

The northern pike is readily recognized by the bean-shaped markings which are light against a dark background. In addition, the northern pike has a completely scaled cheek and upper half of its gill cover, the lower half being bare.

The muskellunge has scales only on the upper halves of its cheek and gill covers, while the pickerel has completely scaled cheeks and gill covers.

In coloration, the aforementioned bean-shaped spots are outstanding, and fins are usually spotted. Main color is bluish or greenish gray but this varies depending upon water frequented.

RANGE...The northern pike is found in most of the fresh waters of the world. In most of Europe the pike is generally huskier and more pot-bellied than in this country, and is not fished for as widely.

In North America it ranges from Lake Champlain westward through the Great Lakes region to the upper Mississippi Valley and Lake of the Woods, northward to Alaska. It is plentiful throughout Canada.

Anglers who know northern pike will fish for it around sunken logs, weed beds and lily pads, and in those deep holes surrounded by heavy cover.

SIZE...The world's record was caught on rod and reel, and a surface "Flaptail" plug, by Peter Dubuc, in Sacandaga Reservoir, New York, September 15, 1940, and weighed 46 pounds, 2 ounces. The average size is from 2 to 4 pounds and 10 pounders are not rare.

FLAVOR...Fair to good, depending upon the skill of the cook.

FOODS...Practically anything that moves; frogs, insects, small birds, all kinds of smaller fish including its own species.

LURES...Bucktails with spoons or spinners, spoons like the Ace, Queen and King, and plugs like the River Runt, Crazy Crawler, Punkinseed, Vamp, Chugger and Lucky 13 produce regularly. The world's record was taken on a surface commotion lure, "Flaptail", which has a revolving spinner at the rear.

Fly fishermen find that bucktails, Spinner-bucktail combinations and feathered minnows are excellent.

METHODS...Bait casting, fly fishing, spinning, still-fishing and trolling.

TACKLE...No special bait casting tackle is needed, just a good outfit like that used for bass. The casting rod should be 5 or 5½ feet in length and made of split, tempered bamboo or tubular steel like the "Pal." The medium action is best for all-around usage.

A lightweight, fast reel like the "Pal" is excellent for trolling, casting or still-fishing and a 15 or 20-pound "Pal-On" nylon line will round out the outfit. A wire leader is recommended.

The fly rod should be 8½ or 9 feet long and with "Power-Plus" action; the reel either automatic or single action like the Imperial. A level line such as a D or C and a strong leader are necessary to handle this roughneck. A spinning rod of medium action, like the "Pal," is ideal, for it will handle both small and large lures with equal ease.



Johnny Helsel of 324 Lakemont Avenue, South Lakemont Altoona proudly displays three fine trout taken at Spring Creek Paradise in June 1949. The fish measuring 18, 19 and 21 inches respectively were caught by his sister, mother and his father, John Helsel.

Enchanted Streams

By JIM HAYES

HAVE you ever felt the eyes of Indian warriors watching you as you fished your favorite stream? Ever seen pioneers slipping along the ridges? Have you ever waded an enchanted brook, netted a trout from a sacred pool?

If you fish in Pennsylvania, chances are you have done all of these things. For nowhere does the present so intermingle with the romantic past as on the streams of Penn's Land. Nowhere do streams names—Tuscarora, Oswayo, Wyalusing—relate of a more stirring past.

Surely a man cannot enjoy his sport to the fullest unless he is able to absorb some of this surrounding mysticism. He must be able to conjure up the romantic past that went into the making of all this. Good fishing streams have a way of getting into a man's blood. Why not, then, dig into the past, as well as the present and future of our enchanted waterways?

Perhaps the angler has fished for bass in Standing Stone Creek. Could he go back through the years, he would see a tall narrow rock in the creekmouth where Standing Stone pours into the blue Juniata. This was the famed "Standing Stone," carved with primitive markings, sacred to the Indians. So long as the stone stood, the Indians believed their tribe would prosper.

The original stone was carried off by Oneida Indians in 1754 when they were driven from the Juniata Valley. Another was set in its place, a fragment of which may be seen at Juniata College. Somewhere in the surrounding hills—perhaps, unknowingly, you have passed it—lies the sacred "Standing Stone."

Up Clinton County way, fishermen have a fine place for trout in Young Womans Creek, which cuts from the northern border to join the Susquehanna below Gleaston. This stream takes its name from an Indian legend. The story goes that a beautiful Indian maid, forbidden to see her lover, "cast herself into the turbid waters near the mouth of the stream and was never more heard of." Later folktales say the girl's spirit still roams the streamside, searching for her lost love. The legend is preserved for us in the stream-name, Young Woman's Creek.

Less mysterious, perhaps, but none the less interesting are the origins of other stream-names. Panther Brook in Pike County is so-called for the numbers of panthers once found in the vicinity. Scrubgrass Creek in Venango County takes its name from the abundance of scrubgrass. Bear Creek, of course, gets that name from the bears once seen by the streamside.

Many creeks were first named by Indians. Look at a map of Franklin County and you will see how Conodoguinet Creek comes by its tongue-twister. This is from the Indian meaning "continual bends for a long way," surely a fitting handle for the ever-rambling Conodoguinet.

Most of our stream-names were angelicized from the Indian. Brokenstraw Creek in Venango County was formerly "Cushandauga," referring to prairie grass in bordering fields. When dry and brittle, the grass bent and broke under the autumn winds. Hence, Brokenstraw Creek.

Indians who once lived in Centre and Union Counties saw an albino deer by a stream. Being superstitious about white animals, they promptly called the creek "Woap'tuchanne," or "stream of the white deer." Today, thousands of anglers cast this fine trout stream without knowing how White Deer Creek got its name.

A stream associated with an Indian legend is Chickies Creek, a favorite with Lancaster County trout fishermen. The name was formerly "Chickieswalunga," or "the place of crabs." Near here an Indian maid slipped away from her brave to meet an amorous paleface. The warrior ambushed the couple, and, following a tussle, leaped into the river with his errant squaw. Site of this epic melodrama is Chickies Rock, near the Susquehanna.

By far the best stream for big brown trout in Pennsylvania is Yellow Breeches Creek in Cumberland County. This stream was so-called because of the yellow beech trees that grow by the banks. As years passed, an "r" was added. Thus, Yellow Beeches Creek became Yellow Breeches Creek.

Nine-Partners Creek, a Susque-

Opening day on Yellow Breeches Creek. Ever wonder how this stream got its unusual name? The origin will surprise you.

hanna brook trout stream, takes its name from a group of surveyors—nine partners—who mapped the region.

Perhaps reluctant to change the poetic Indian names, most of our streams retain their old titles. Aquashicola Creek in Carbon County means "where we fish with the brush net." Tobyhanna is "alder stream." Shickshinny means "five mountains." In Montgomery County is Perkiomen Creek, "where there are cranberries." Lackawaxen is "where the way forks," referring to the confluence. Wyalusing is "home of the old warrior"; present-day anglers may find other connotations in this, but it originally referred to an old Indian chief who lived by the streamside.

Nescopeck Creek in Luzerne County comes out "black, deep and still water," as mysterious in the translation as it is in the Indian.

Like to go back through history again to a day in the 1700's? It's a warm, breezy day in Juniata County, the kind of day when a man likes to walk around and explore the mountains. This particular day a settler hikes far into the hills, where he comes on an unmapped brook. In the current he sees trout playing over the gravel. That night the man returns home and tells of this hidden stream. Days later, he returns with his son. But the brook has vanished. It isn't until years later that his son, strolling in the mountains, finds . . . . . Lost Creek.

Now we won't say that knowing such odd bits of history will help you catch bigger fish, or more fish. Nor do we believe that creeling fish is all there is to the sport of angling. For ours are enchanted streams. These darkly swirling currents have viewed many a fascinating event. With a little delving and a little imagination, they can, like magic mirrors, reflect the glory and pageants that have passed before.

America's earliest anglers, the Indians, left behind a golden treasury of stream-lore and legend. Pioneers came and went, leaving their traces in stream-names. It's up to the fishermen of today to preserve these traditions, and to pass them along to future generations.

Homestead Elects

At the annual election of the Homestead District Sportsmen's Association held on Friday, September 9 the following officers were elected for the ensuing year: President, John (Beau) Howe; Vice President, Joseph Baldwin; Secretary, William C. Bittner (Bulgy); Treasurer, Joseph Marlowe. The Executive Committee is comprised of: Bob Ford, Wildlife Photographer; Jess Best; Homer Kessler; Joe Kovacs; Andrew Schultz. The Homestead group is an active one and plans many activities for the next year.

What's New in Fishing Books

Reviewed by Hugh Johnson

Englishmen were casting their "blue dunne" before Christopher Columbus touched our shores, and were writing books about trout fishing long before Jamestown was settled. With a heritage of centuries of trout fishing on a few dozen rivers and streams lacing the British isles, it is small wonder that modern English angling literature, while lacking the robustness and broad horizons of American writing, has greater maturity and sensitivity than ours and reflects a true contemplative philosophy that has its roots in Cotton, Izaak Walton and Dame Juliana Berners. So it behooves us, now and then, to take note of the books that English anglers are writing.

Within the Streams by John Hillaby, published in London this year, is a notable example of contemporary English angling literature. It is the author's story of his development as a fisherman, from fishing, at the age of fourteen, for gudgeon and eels on the Leeds and Liverpool canal (between the gasworks and the brewery!), with bread crust for bait, to fly fishing for trout in the deep waters of a beautiful Scottish loch. Mr. Hillaby writes with wit—a sly, subtle wit so nicely tailored for the angler-reader that the non-angler will miss it, and with the heart of a man to whom fishing is everything. Through England, Ireland and Scotland we fish—and even enjoy a short visit in the author's conception of what a fly-fisherman's Hell might be! The locales are not important,—it's the spirit of fishing universal that permeates the whole, the very soul of fishing so comfortably and warmly contained in Mr. Hillaby's prose, that makes *Within the Streams* worthy of a place in any fisherman's library on either side of the Atlantic. It's 9/6 which devaluates into less than $2.00 and makes it a bargain for us. If any ANGLER reader wants a copy I'll be glad to try to get it for him if he will write me about it, without sending any money at first, in care of THE PENNSYLVANIA ANGLER.

John E. Hutton, author of *Trout and Salmon Fishing* (published September, 1949 by Atlantic-Little, Brown & Co., Boston, Mass., $5.00) is an Englishman who is widely recognized, especially by the Atlantic salmon anglers of the Canadian rivers, as one of the most baffling, skillful fishermen of our time. In his book, *Trout and Salmon Fishing*, he gives generously of his knowledge, and the precision with which he presents it establishes this book on a level far above average. The material on trout fishing is good, but what gives this book its real distinction is the work on the salmon and I will even go so far as to say that this is *the* "textbook" for a man who is preparing for his first whack at salmon fishing in the Miramichi, the Bonaventure, the Grand Cascapedia, or any of the other famous Canadian Atlantic salmon rivers. If you are one of the "sports" who are satisfied with "black" salmonfishing in the high waters of early Spring,—"duffer's water," then this book is not for you and John Hutton will have little truck with you, but if you look toward the *summum bonum* of sport fishing—fly casting for "bright" salmon in low water—you will not find a better, more readable foundation course than that contained in Mr. Hutton's excellent volume.

Dormont-Mt. Lebanon Sportsmen's Club Reorganizes

At a recent meeting of the Dormont-Mt. Lebanon Sportsmen's Club of Pittsburgh the following officers were elected to serve for the ensuing year: Pres. Ted D. Kinney, 1164 Cedar Blvd., Pgh. 16, Pa.; V. Pres. H. C. Ruehrshneck, 354 Vanadium Rd., Pgh. 16, Pa.; Treas. Wm. C. Knechtel, 3225 Gaylord Ave., Pgh. 16, Pa.; Secy. Ralph R. Berry, 123 Maple Terrace, Pgh. 11, Pa.

A Note on Spinning

Casting with spinning tackle is not new to the fishing world. Developed many years ago in Europe and the British Isles, it is the most popular method of angling in use today in those countries. Although spinning tackle was first introduced to the United States some twelve years ago, it has enjoyed enthusiastic reception by American anglers who have once tried it.

Spinning tackle has very definite advantages. With it, the angler can cover more fishing water with less effort. Lighter lures can be used, and it is impossible to get a backlash—a fact which makes spinning popular with the beginner who likes to use both live and artificial bait.

A spinning rod should be about seven feet in length and weigh approximately 4½ ounces. The weight of the rod actually depends on the action desired which, in turn, depends on the type of fishing that will be done. Trout and small lake fishing is best done with a limber rod of light weight. Heavy game fishing may require pressure to turn a fish and a stiff rod of heavier weight is the best choice.

In spinning, the emphasis is on light lures and lines. While a heavy rod will handle most types of lures, it will not cast the light lures as far as might be desired.

Bamboo rods are the best available. Metal rods stand more abuse but are heavier to handle. The new rods now being made of fiber glass have a nice action for casting. Some fly rods can be rebuilt and by using an adapter handle a good spinning rod can be made.

At present, most spinning reels are imported. Some have additional features such as: anti-reverse on the handle to assist in playing a fish, drag control adjustment, slotted spools for holding the end of the line on the spool, folding handles, roller type pick-up arms and counter balanced housings.

Two types of line are used: a braided line and a single strand type. Line breaking strength runs from two to six pounds for the single strand and from three to ten pounds for braided lines.

A wide variety of lures is available in the proper weight class for use with spinning tackle. A good selection should include floating bugs, small sinking and floating plugs and under water spinners.

Canadian Bass Like Bugs Too

By DICK FORTNEY

If you are one of the growing numbers of Pennsylvania anglers who enjoy fishing vacations in Canada, be sure to include your bass rod and a supply of cork and deer hair bass bugs in the kit you carry to the northern lakes and streams next summer.

Big plugs and spoons, lines that test 30 pounds, and steel casting rods are the tackle usually associated with Canadian angling. The unthinking sportsman comes to the wholly unwarranted conclusion that Canadian waters and fish are too big for the fly rod and the tiny lures which are used with it.

As a matter of fact, many fishing camp proprietors and guides in Canada have this same idea.

But the fly rod lures that catch bass in Pennsylvania also will take big bass and pike north of the frontier. And since the fish of Canadian waters react much the same as their Pennsylvania cousins to fly rod creations, the Keystone angler does not need a lot of special instructions in order to be able to use his fly rod assembly successfully.

My friend, Gus Hoff, and I took our fly rods with us last summer on a two-week trip to the fine waters of the French River.

Doug Pitkethly, one of the operators of the Lift the Latch Lodge, where we spent our time between fishing trips, dropped into our cabin one evening and became greatly interested in the assortment of cork-bodied bass bugs in my tackle box. He suggested that we give them a trial some day. We did the following evening after dinner, just as the sun was setting and with a dead calm on Dry Pine Bay. In fact, we fished within sight of the boat dock of the lodge.

Doug quietly rowed our boat to a corner of the bay where the water was not more than four or five feet deep and where there was a good growth of weed on the bottom.



There were plenty of fish waiting for fly rod lures in this bay in the lake just beyond the parked canoe.

We began casting with a small, frog-like popper, but there was no immediate response, so we switched to a feather minnow. It had a balsa wood body tinted green and yellow and a bunch of green feathers serving as a busky tail.

This lure sank only an inch or so beneath the surface of the water and was plainly visible as it was retrieved with short twitches of the rod tip, to imitate a minnow swimming near the surface.

The lure, on the very first cast, had not traveled more than four feet when it brought action.

A fish broke the surface some three feet from the lure, arrowed toward it with such vigor that spray flew, and nailed the lure with a smashing strike. It put up a good fight, even against a heavy bass rod, and finally was brought to the side of the boat, carefully unhooked, and returned to the water.

The fish was a northern pike that Doug estimated would go about three pounds in weight. It was solidly hooked in the jaw.

That pike was a bit of a surprise, as a matter of fact. We had hoped for a strike or two from bass, but hardly expected action from a member of the pike family on such a lure.

As previously stated, we found that Canadian fish react toward fly rod lures much the same as Pennsylvania bass do. The small lures did not produce action in water more than four or five feet deep, for one thing. Sometimes the lures brought action when they were made to splutter or make some other noisy disturbance. At other times strikes resulted only when the lures were handled with the utmost gentleness.

The color of the lure did not make any particular difference—it was decidedly the action of the lure that counted.

The feather minnow proved a consistently good lure. Another which brought good strikes was a cork-bodied frog with hair legs that moved realistically when the lure was retrieved.

Naturally, the fish were found in their feeding grounds—the weed beds in the bays of the French River and the inland lakes into which our guide carried a canoe so that we could fish.

We soon learned, also, that an old tree or some brush that had fallen into the water harbored alert fish. Incidentally, all of our fishing was done just off the shore-lines, which provided the shallowest water.



The author displays a four-pound bass that was caught on a feather minow fished with a fly rod in a Canadian Lake.

The tackle used was much the same as has proved effective on the streams of Pennsylvania.

The rod was eight and half feet long, of medium stiff action; the leader about eight feet of nylon.

Cast of 30 to 40 feet, which are not so bad when the angler is sitting cross-legged in the bottom of a canoe, proved long enough to get the lure to the fish without frightening them. We didn't wade in the water, of course, and the canoe always was skilfully handled, which helped us to catch fish at much shorter range than usually is possible in river or creek in Pennsylvania.

We were pleased most of all by the fact that we did not catch only small fish when using the fly rod lures. Many small bass made passes at the bugs, naturally, but the three-pound northern pike was not the only good fish that demonstrated its interest.

The biggest thrill of the whole two weeks was provided by a four-pound largemouth bass, which is shown with the author in one of the illustrations accompanying this article.

We were fishing in Mud Lake, two portages distant from the French River itself. Our guide knew that some really good bass lived in the lake, and he had located their feeding grounds at one side of the lake where there was a good growth of weeds and water lilies and where a couple of fallen trees extended their naked trunks down into the water.

One small bed of lilies looked particularly attractive. The feather minnow was attached to the lure, and in the first cast it landed atop one of the big leaves in the lily bed.

A couple of light twitches of the fly rod made the bug seem to tremble and quiver atop the leaf. Carefully the lure was maneuvered to the edge of the leaf, allowed to rest there a few seconds, and then tipped into the water

and moved forward an easy hop or two, just under the surface.

The big bass came boiling out of the lily bed and struck the lure with a surge that put a beautiful bend in the rod.

"You've got a good one," the guide exclaimed, digging his paddle deep into the water and watching the line to see what maneuvers the hooked fish might have in store for us.

The bass fought with spirit for four or five minutes, then was led to the side of the canoe and lifted aboard.

The feather minnow was well hooked in the corner of its mouth.

We kept the fish in the air long enough for its picture to be taken and for the guide to estimate its weight, then returned it to the waters of Mud Lake to give another fisherman a battle some day.

If we needed a clincher for our decision to the French River another year—and to use the fly rod as often as possible—that big Mud Lake bass provided it.

We're going to tie a lot of feather minnows and corked-bodied frogs during the coming winter months.

If you have a friend who hunts wild ducks treat him nice, he can be the source of many desirable feathers for your flies.

If you really want a fishing thrill catch a 20 inch small mouth on a plug, for a bigger thrill return him and watch him swim away.

Fish Warden Refresher School Conducted at Bellefonte

The Annual Fish Warden's Refresher School was conducted at Bellefonte on September 20-21-22, 1949. The classes were held in the Administration Building at the Fisherman's Paradise on Spring Creek and were under the supervision of W. W. Britton, Chief Enforcement Officer for the Commission.

Tuesday, September 20th was devoted to "proper procedure in prosecutions and hearing conduction"; "proper methods for making a search of homes, automobiles and individuals." A mock court trial involving an intricate fish law violation provided much technical and research information to the conclave of Pennsylvania's Fish Law Enforcement Officers. A timely lecture on "Stream Pollution and How To Detect It" by J. R. Hoffert, Chief Engineer of the Pennsylvania Sanitary Water Board. Tuesday's sessions were concluded with valuable and informative lectures by Curtis Allen of Boston, Massachusetts who is the Regional Supervisor of Law Enforcement for the U. S. Fish and Wildlife Service; Robert J. Hawley, Toms River, New Jersey, U. S. Game Management Agent and Harold Dewey, Auburn, New York, U. S. Game Management Agent, both of whom are with the U. S. Fish and Wildlife Service.

The entire morning of Wednesday, September 21st was devoted to a lecture and demonstration in the art of self defense and the handling of violators by Richard McIlwain, Federal Bureau of Investigation. The afternoon session got off with a lecture on "How to be Held in Good Respect Even Though a Fish Warden" by J. Allen Barrett, Director of Public Relations for the Pennsylvania Fish Commission, followed by a lecture on "Hatcheries, Fish Culture and How the Warden Can Help" by C. R. Buller, Chief Fish Culturist for the Pennsylvania Fish Commission. Carlyle Sheldon, Fish Warden for Crawford County exhibited a fine collection of species of fish known to the waters of northwestern Pennsylvania and imparted his knowledge of the habitat and general characteristics. The afternoon session was concluded with the conduction of a general round table box.

Thursday, September 22nd was devoted to a diligent review of the fish code and in the afternoon the school was addressed on the topic of "Value and Proper Training of An Officer" by Wilbur Cramer, Assistant to the Executive Director of the Pennsylvania Game Commission. The school was concluded with a full dress uniform inspection.

The Executive Director of the Fish Commission, the Hon. C. A. French was present and directed the school while Chief Fish Warden, Mr. W. W. Britton supervised the classes. That much valuable information was gathered and absorbed by the Field Force of the Commission is a foregone conclusion. The exchange of various law violations and delicate situations as arise in the several parts of the state were thoroughly discussed and definitely placed under its proper phase of the fish law. The new Wardens employed since the last Refresher school were brought up to date and better familiarized with the general procedure employed by the entire force. The Hon. Louis S. Winner and the Hon. Paul F. Bittenbender, Members of the Fish Commission were among the honored guests who visited and observed the proceedings.



MEET YOUR FISH WARDEN!

1st Row, L. to R.—H. R. Stackhouse, Administrative Secretary; C. R. Buller, Chief Fish Culturist; J. Allen Barrett, Director of Public Relations; C. A. French, Executive Director of the Pennsylvania Fish Commission; Paul F. Bittenbender, Member of the Fish Commission and Robert M. Greener, Warden, Lancaster County.

WARDENS AND THEIR COUNTIES FOLLOW

2nd Row—Arthur L. Walker, Indiana Co.; R. J. Womelsdorf, Luzerne Co.; Minter C. Jones, Somerset Co.; George Cross, Clinton Co.; Claude B. Baughman, Blair Co.; W. W. Britton, Chief enforcement officer; S. Carlyle Sheldon, Crawford Co.; Dean R. Davis, Jefferson Co.; Clinton B. White, Lawrence Co.

3rd Row—Budd R. Brooks, Washington Co.; Sam F. Henderson, Westmoreland Co.; Anthony J. Lech, Schuylkill Co.; Leland E. Cloos, Tioga Co.; Charles Litwhiler, Columbia Co.; John A. Schadt, Jr., Wayne Co.; Harvey D. Neff, Lehigh Co.; George H. James, Cumberland Co.; Horace A. Pyle, Chester Co.; Arthur S. Snyder, Union Co.; J. Knisley, Caretaker, Fisherman's Paradise.

4th Row—Bryce Carnell, Fulton Co.; Kenneth Aley, Potter Co.; Harper P. Main, Jr., Franklin Co.; David Dahlgren, Centre Co.; C. Nevin LeDane, Student Officer; James H. Banning, Fayette Co.; Ralph O. Singer, Pike Co.; William E. McIlnay, Bedford Co.; Harry Z. Cole, Montgomery Co.; Harold Corbin, Huntingdon Co.; Norman W. Sickles, Berks Co.; L. E. Close, Cameron Co.; John S. Ogden, York Co.; G. Max Noll, Susquehanna Co.; Paul D. Wilcox, Bradford Co.; C. A. Bidelspacher, Lycoming Co.; Ross C. Bailey, Warren Co.; B. F. Barnhart, Dauphin Co.; Clifton Iman, Butler Co.

5th Row—Clarence Shearer, Armstrong Co.; Lester C. Ogden, Clearfield Co.; Julius Ahrens, Venango Co.; Rayel Hill, Carbon Co.; Norman L. Blum, Forest Co.; Frank L. Ottaway, Erie Co.; Edward Lee Lake Erie; Keith Harter, Lackawanna Co.; Harland Reynolds, Wyoming Co.; C. V. Long, Juniata Co.; and Floyd Bachman, Monroe Co.

Rambling Thoughts on the Flyrod

By G. L. HOLLER

THE OTHER day a friend of mine asked me in all sincerity, "what flyrod shall I buy?" Bill has always been a patron of the short rod. He had been thinking over this flyrod game and then paid me the great compliment of asking my advice. I must have been talking for over an hour when Bill glanced at the clock and politely excused himself. Gosh, I hadn't covered the field like I wanted to. This kept worrying me and the more I thought of it the more I wondered if there weren't more like Bill. Very, very seldom is anything new written on subjects like this one and yet, there is always a new group of interested people coming along, some young and some not so young, and they want something to think about. Not advanced stuff on the life cycle of this or that fly—they haven't a desire as yet for this type of information. What this group wants is help on what to buy and how to use it so that a start can be made.

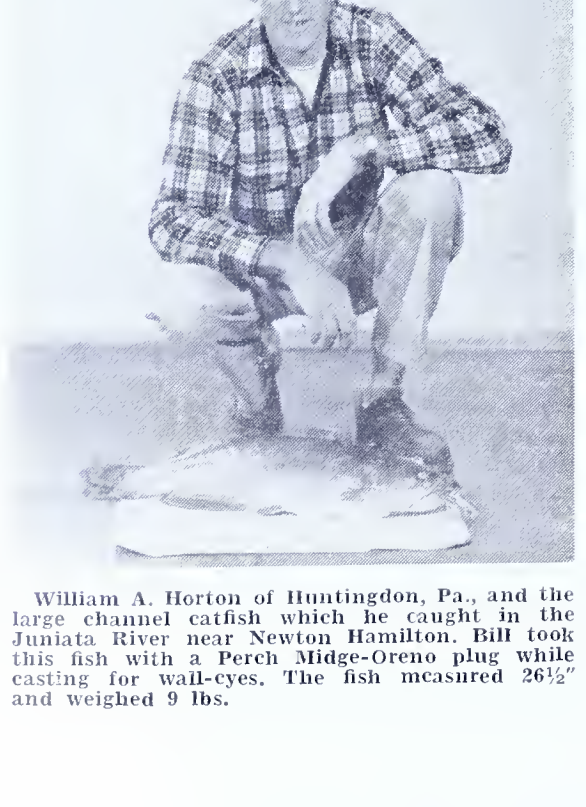
So here is an article that I wish I had read many years ago and from which I had profited. I had to learn without help and it took many years of experimenting before I felt at home with a flyrod. Believe me I know that I am still a dub in this game but will try to give the beginner some help and I do hope the help is all good.

The following statement is likely to make someone see red but I honestly believe it. If you go into a reputable store that handles quality tackle you can lay fifteen dollars on the counter, say einie, meinie, mienie, mo, grab any rod in that price range, and you will have a rod that will give you many years of dependable service. Of course you might think that if you take along Joe Doakes, who is a purist and fishes with a sixty dollar rod, he may find you a forty dollar rod for fifteen dollars. Tain't so mister, tain't so. He might find you a fifteen dollar rod for fifteen dollars or a fifteen dollar rod for eighteen dollars but never the other way around. Common sense and a little thought will show you the truth of this. After all, the boys making those rods know more about bamboo than you or I ever will. And when they put a fifteen dollar tag on a rod you can bet it's a fifteen dollar rod or a reasonable facsimile. But you will want to choose your rod.

First, I would look for a rod 8½ or 9 feet long. Rods of 7½ feet in the low price field are not good casters for good action can not be built into them for that price. Also, the short rod does not allow you to reach across the average stream to fish the far side as in spinner or bait use—you have to wade across.

I would choose a bamboo rod to start with as it is a much more sensitive instrument for the light trout fly and the shorter distances of trout fishing. In larger water, where most bass fishing is carried on, the tubular steel rod has much to recommend it. Compared with a bamboo rod of like price it is stronger, more nearly trouble-free and can be roughed up more than the bamboo rod. Of course the glass rod is a horse of another color and some well-to-do person will have to make that comparison as far as I am concerned.

Next, I would check the reel seat. If you are going to use an automatic reel you should get a real seat that locks from the far end and pushes the reel up closer to the handle. In this way the trigger of the automatic reel projects over the handle and makes it easier for the little finger to work. If a single action reel is to be used the reel seat is not so important but, all other things being equal, it would be better to have the reel seat lock away from the handle. The weight of the reel being slightly removed from the handle, the rod seems to swing more easily.



William A. Horton of Huntingdon, Pa., and the large channel catfish which he caught in the Juniata River near Newton Hamilton. Bill took this fish with a Perch Midge-Oreno plug while casting for wall-eyes. The fish measured 26½" and weighed 9 lbs.

For the next step, hold the rod straight out from the eye and squint along it. Then slowly turn the rod completely around. I have never seen a rod in this price class have the same bend in it as you rotate it but the closer you come to that the better the rod. Then, and this is most important, hold the rod out to the side of you and below the light fixtures. Then swish the rod back and forth. Do not jiggle it but swish it quite hard. While doing this, all of a sudden hold the rod still. It should stop without a slow wobble back and forth. And incidentally, while swishing the rod there should not be any jars felt in your hand or any audible clicks. These may be slight but if present will more than likely signal a loose ferrule and, after all, you want a sound rod to start with. And by the way, the guides should be steel, not agate. The agate guide is heavy and easily broken and in no sense is necessary.

All this is one of the hard ways to get a rod. It would be easier to have one given to you or to win one on a punch board. Of course any honest way counts.

Choosing the reel should be easy—or is it? Its primary purposes are to store the line when not fishing, and to store line not in use when fishing. Concerning the latter, I have heard of fellows who actually play a fish from a fly reel but, for some reason or other, have never seen this done. The usual process when a fish is on is to strip in the line until it forms dangerous loops around the feet. Obviously a guy could get all tangled up in these loops and, if he should tie into a good sized fish, you can bet your boots that said fish will tie knots in that loose line. So, just before that dangerous situation occurs, line that has been stripped is held against the rod by the same hand holding the rod and the loose line is reeled on to the fly reel.

Why not an automatic for this job? I'll admit that in big water and with large fish a fisherman, with practice, can handle that loose line faster and more easily. But for the average trout fisherman an automatic seems unnecessary. In the first place it is too heavy. "But it balances the rod," someone will say. That is like a person handing you another bucket so that you can carry one in each hand—they balance so much better. You are still doubling your load. And then, secondly, an unrestrained automatic can break leaders and flyrod tips faster than you can repair them. Oh, yes, I know this shouldn't happen but it does. And too, many people try to use the automatic to land the fish for them—if that hook pulls loose, oh boy! So I still believe that the single

action in the hands of the beginning fly fisherman will land more fish. It may take a little longer, but we often loose them by hurrying.

Since I've decided that you are going to buy a single action reel, let's talk about it some more. As you have guessed by this time it should be light. It should also be free of cracks between spool and frame in which a line might become wedged and ruin the finish. It should be a large reel with quite a large spool on which the line may be coiled without crowding. Also you should have some type of drag or click so that while you fish the unused line will not unspool. When this unspooling occurs it is always embarrassing, particularly when forcing your way through brush. It's funny but you seldom hear of brush in trout fishing or barbwire in rabbit hunting but, brother, they exist.

Now let's put the reel on the rod. This may sound like a common-place job but right here is where the trouble may start. The reel should hang underneath the rod with the handle for a right-handed man on the *left-side* for left-handed reeling. Yes, I know. Most fishermen and all American manufacturers will disagree. But if you check back all the way to Isaac Walton you will see how many authorities mention this in their writings. With this hook-up you can cast, hook, play and land your fish without changing hands on your rod. This means, of course, you will have to net your fish with your left hand but that shouldn't be hard. I'll bet all of you have driven a car with your left hand.

Before we put the line on the reel suppose we hash over this business of lines.

Even though the line is more vital to fish-catching than is the reel, the answer to the line problem is simpler. Get a level line, size D. If there is some question in your mind, have a friend who knows trout fishing take your rod and try different line sizes on it at actual trout casting distances. I am willing to bet that he will say line D. Here is why I say this. Rods in the price range which I discussed earlier, generally need a line this heavy for the short cast. As the average cast gets longer the line may be lighter. The weight of the line between the rod tip and the leader is what cocks the power of your rod. A long cast with a lighter line will have about the same working weight as a shorter cast with a heavier line. This doesn't mean that you should change lines every time you change your casting distance but you should match the line to the rod for the *average* length cast you will be making. Of course this reasoning applies to the level line of the beginner. It also could apply to a double tapered line but does not apply to the torpedo line. The weight of the torpedo line remains practically the same regardless of the distance of the cast and is, perhaps, the perfect line. But there is a difference in price too—about the difference would be between $3.50 and $12.00. Just too much money at this stage. I might mention here before I forget it, as the line diameter gets larger, from D to C to B, it becomes more difficult to get the line to float. Naturally the larger the line is the heavier it becomes and a floating line is a necessity with most of your flyrod fishing. Also these larger lines do not work through the guides that are generally put on rods as well as the lighter line.

The line is on the reel and the reel on the rod, now suppose you locate yourself on a nice lawn or field with no obstructions either front or back or overhead for at least fifty feet. Be nonchalant; pay no attention to move-



Almost equal to the sport of catching fish with night crawlers or night walkers as you may have it, is the sport of catching the walkers themselves. Age is no respector as the above photo clearly indicates.

ments in the curtains at your neighbor's windows. After all your wife knows where her husband is.

First of all, put your handkerchief in your hip pocket and keep it there. If you go tucking it under your elbow it will just get dirty falling on the ground. Then lay the rod on the grass and pull about thirty-five feet of line straight out from the rod. Pick up the rod by just grabbing the handle. How you grab it makes little difference, I believe, just so it feels comfortable. If after trying various grips you have no particular preference, try the grip with the thumb on top. It is my opinion that this grip helps to keep you from swinging the rod back too far and, on the forward cast, a strong thumb will help.

Now lets talk about what you are going to do. You are NOT going to cast the line out with your arm movement but are going to cock the rod so that it does the work. This first step is the hardest for the beginner to understand. Think of the rod, in a sense, as a slingshot. You have to cock the slingshot to throw the stone. To cast the fly you have to make the line bend the rod so that when the rod snaps back it whips the line out.

There are three parts to the cast: 1) The Back Cast; 2) The Wait; 3) The Forward Cast. Of the three the most important is the back cast for, without a good back cast, a good forward cast is impossible. The power or speed of the back cast is greatest at the start and then gradually diminishes till the rod comes to a stop directly at the perpendicular. Later you may coast the rod slightly beyond this point and slowly bring it back to the straight up position while you wait for the backward tug of the line, but at first it would be better to watch the rod and stop it when it is straight up. This pickup of line, as it is called, is hard and sudden, like Ty Cobb running at full speed on his second step. The important thought is to jerk that line as high and as far back as you can. It must be high because that old law of apples falling on people's heads starts to apply as soon as the line leaves the ground. Even when the line starts forward it should be no lower than the tip of the rod, as held in vertical position.

Let's go over this again. The line is jerked suddenly and hard way up and back. There is a pause to give the line time to straighten out and then, just as the line starts to tug at the rod, it is swung hard and quickly down till the rod tip points to that spot just above the horizon where the sun is so pretty when it sets. The thought here is to bend that rod so that when it straightens out it throws the line for you. On this downward swing there is another movement used by many fishermen. It varies from a slight to a very rough push forward of the wrist and elbow. This is done to push more bend in the rod. A light action rod will need very little if any extra push and a steel tubular rod would need the most. You can experiment with this movement and you will find it easy to adjust to your rod and to the distance you are going to cast.

Simple isn't it? Believe it or not you have just learned the overhead cast—or have you? Although you should not concern yourself about it now, there are many more casts to learn as you improve. There are the snap cast, the roll and side cast, the high hard one, the floater, the outcurve, the incurve, and many more. I have discovered one that I call the screwball cast—*nobody* knows where it is going.

So, above, are my thoughts for the beginner: what rod, what reel, what line, and what to do with the three when they are put together. Good luck, fellows!

Pennsylvania Fish Law Violations

Cases settled during the month of September 1949

ALLEGHENY COUNTY

Anderson, Edward, Jr., R. D. 1, Monaca, Pa. Operating motor boat without a license $10.00
Bain, Ernest, 335—34th St., McKeesport, Pa. Illegal operation of motor boat 10.00
Benaguisto, Americus, 138 First St., Aliquippa, Pa. Illegal operation of motor boat 5.00
Black, Thomas, Sr., R. D. 2, Box 431, McKeesport, Pa. Fishing in nursery waters 100.00
Carlberg, John, 736 9th St., Oakmont, Pa. One undersized muskellunge .. 10.00
Cinquegrane, George J., 216 Cairo St., Pittsburgh 11, Pa. Fishing without a license 25.00
Ecker, Evelyn, 1157 Patton St., Pittsburgh, Pa. Fishing without a license 25.00
Ellis, Stewart A., R. D. 3, Coraopolis, Pa. Illegal operation of motor boat 10.00
Gerbec, Randolph C., Lloydell, Pa. Illegal operation of motor boat 10.00
Hitchens, George, 2209 Harrison St., McKeesport, Pa. Fishing without a license 25.00
Hoeltje, Robert, 738 Stanton Ave., Pittsburgh 4, Pa. Illegal operation of motor boat 5.00
Hopkins, Edward, 939 Mayfield Rd., Tarentum, Pa. Illegal operation of motor boat 10.00
Jones, L. R., 2508 Liberty Ave., Pittsburgh, Pa. Illegal operation of motor boat 10.00
Keller, Earl, 654 Pennridge, Pittsburgh 11, Pa. Illegal operation of motor boat 10.00
Krivijanski, John, 212 W. Elizabeth St., Hazelwood, Pa. Unnaturalized foreign-born resident fishing 20.00
Krivijanski, Joseph, 202 Courtland St., Pittsburgh 7, Pa. One undersized bass 10.00
Limbruner, Charles A., 309 Rothman St., Pittsburgh, Pa. Fishing without a license 25.00
Martin, John J., 162 James St., Springdale, Pa. One undersized bass 10.00
McKean, James, 1002 Elizabeth, Pittsburgh, Pa. Operating motor boat without a license 10.00
Post, Joseph, 1150 Boswell St., Pittsburgh, Pa. Operating motor boat without a license 10.00
Reese, Young, 3245 Arlington Ave., Pittsburgh 10, Pa. Exceeding creel limit 20.00
Stewart, Joseph F., 313 Mill St., Coraopolis, Pa. Unattended set line 20.00
Thomas, E. G., 526 Cora St., Pittsburgh 21, Pa. One undersized bass 10.00
Zellefrow, Hallam F., R. D. 1, Oakdale, Pa. Two undersized bass 20.00

BEAVER COUNTY

Barness, Joseph, 511 Wilson Ave., Ambridge, Pa. Lending fishing license 25.00
Pander, John, R. F. D. 2, Ellwood City, Pa. Fishing without a license 25.00

BEDFORD COUNTY

Kelley, Fred, Riddlesburg, Pa. Fishing without a license 25.00
Peck, James, Hyndman, Pa. Snatch fishing, foul hooking or snag fishing 20.00
Rankin, John, Clearville, Pa. Two undersized brook trout 20.00

BERKS COUNTY

Binkley, Alvin, 2239 Perkiomen Ave., Reading, Pa. Illegal operation of motor boat 10.00
Boyer, Lewis, 1226 Union St., Reading, Pa. Illegal operation of motor boat 10.00
Dries, Earl, 49 S. 11th St., Reading, Pa. Permitting a person to operate motor boat in a reckless manner .. 10.00
Fisher, Reilly, 526 Oley St., Berkshire Heights, Pa. Exceeding creel limit . 30.00
Frankhouser, Earl, 201 W. Broad St., Shillington, Pa. Operating motor boat without a license 10.00
Haines, Clarence V., 1718 Pear St., Reading, Pa. Exceeding creel limit 30.00
Henninger, Charles I., Strausstown, Pa. Exceeding creel limit 20.00
Marks, Robert A., 1731 Pear St., Reading, Pa. Exceeding creel limit 30.00
Murray, Earl, 1310 Union St., Reading, Pa. Exceeding creel limit 10.00
Rorbaugh, John, 1832 Perkiomen Ave., Reading, Pa. Reckless operation of motor boat 25.00
Wanner, Anthony, 623 Franklin St., Reading, Pa. Exceeding creel limit 10.00
Weber, Martin, 787 N. 9th St., Reading, Pa. Reckless operation of motor boat 10.00
Wien, G. Willard, 202 Douglass St., Reading, Pa. Operating canoe without displaying license plates 10.00

BLAIR COUNTY

Behm, Helen, 821 4th Ave., Altoona, Pa. One undersized bass 10.00
Detwaller, Ralph, R. D. 1, Williamsburg, Pa. One undersized bass 10.00
Dicriscio, Samuel, 4001 Broad Ave., Altoona, Pa. One undersized bass 10.00
Dodson, H. V., 325 Lexington Ave., Altoona, Pa. Rods not under control 20.00
Fink, Clair, R. F. D. 3, Tyrone, Pa. Illegal device 20.00
Miller, J. H., 4100 Beal Ave., Altoona, Pa. Fishing in closed stream 25.00
Smith, Harold L., R. F. D. 1, Martinsburg, Pa. Exceeding creel limit 10.00
Wentz, Paul A., 821 South Main St., Roaring Spring, Pa. Exceeding creel limit 10.00

BUTLER COUNTY

Duffer, John C., R. F. D. 4, Butler, Pa. Four undersized bass 40.00

CAMBRIA COUNTY

Cole, William G., R. F. D., Ashville, Pa. Rod not under control 20.00
Day, Floyd S., R. D. 1, Conemaugh, Pa. One undersized pike 10.00
Mann, Marshall S., Colver, Pa. One undersized bass 10.00
McClelland, Clifford L., 400 Bay St., Oakland, Pa. Illegal device 20.00
McCombie, Roy N., Spangler, Pa. Exceeding creel limit 20.00
Myers, John, Nanty Glo, Pa. Illegal device 20.00
Perkosky, Leonard, House 29 Paint St., Scalp Level, Pa. Illegal device 20.00
Sherry, Francics C., Spangler, Pa. Exceeding creel limit 30.00
Vidinsky, John, 808 Johnstown Ave., Portage, Pa. Illegal device 20.00
Yoder, Arnold A., 287 Cooper Ave., Johnstown, Pa. Illegal device 20.00

CARBON COUNTY

Rex, Asa, Jr., Palmerton, Pa. Exceeding creel limit 20.00

CENTRE COUNTY

Beresm, Albert K., Osceola, Pa. Violation of the rules and regulations of Spring Creek 20.00
Bryan, Frank A., Powelton, Pa. Trespass with intent to fish on State Fish Hatchery 100.00
Gilson, Charles A., Powelton, Pa. Trespass with intent to fish on State Fish Hatchery 100.00
Miller, Earl M., Powelton, Pa. Trespass with intent to fish on State Fish Hatchery, Pleasant Gap 100.00
Murphy, Edward D., R. D., Osceola Mills, Pa. Trespass with intent to fish on State Fish Hatchery, Pleasant Gap 100.00
Packer, Jack R., Blanchard, Pa. Fishing without a license 25.00

CHESTER COUNTY

Clark, Harry H., Cochranville, Pa. One undersized bass 10.00
Culclasure, Major, 504 S. 1st Ave., Coatesville, Pa. Transferring fishing license 25.00
McLaughlin, Gertrude, 504 S. 1st Ave., Coatesville, Pa. Fishing without a license 25.00
Spence, John A., R. F. D. 2, Coatesville, Pa. Fishing without a license 25.00

CLARION COUNTY

Johnson, Richard, Wilson Ave., Clarion, Pa. Trolling from boat while in motion 20.00

CLEARFIELD COUNTY

Atkins, Jack G., Brisbin, Pa. One undersized bass 10.00
Radzymisky, Thaddeus A., Osceola Mills, Pa. Trespass with intent to fish on State Fish Hatchery, Pleasant Gap 100.00
Chaplin, Robert E., Coalport, Pa. Fishing without a license 25.00

CLINTON COUNTY

Cohick, Paul R., 117 E. Water St., Lock Haven, Pa. Operating motor boat without a license 10.00
Myers, George A., 714 E. Water St., Lock Haven, Pa. Operating motor boat without displaying license plates 10.00

COLUMBIA COUNTY

Lloyd, Fred H., 1415 Walnut St., Berwick, Pa. One undersized bass 10.00
Steward, Loren S., R. D. 5, Bloomsburg, Pa. Fishing without a license 25.00

CRAWFORD COUNTY

Myers, Charles D., 522 W. Spruce St., Titusville, Pa. Trolling with motor boat 20.00
Wargo, J. N., 838 N. Cottage St., Meadville, Pa. Rods not under immediate control 20.00

CUMBERLAND COUNTY

Fuller, N. R., Mechanicsburg Naval Depot. Fishing without a license .. 25.00

DAUPHIN COUNTY

Butsy, J. E., Harrisburg, Pa. Fishing in closed season 25.00
Meritz, Russel L., 1443 Vernon St., Harrisburg, Pa. One undersized bass 10.00
Miller, Mrs. M., 1939 N. 7th St., Harrisburg, Pa. Fishing without a license 25.00
Robinson, Odessa, 1010 Cowden St., Harrisburg, Pa. Fishing without a license 25.00
Schmittel, Benjamin H., Harrisburg, Pa. Fishing in a closed stream 25.00

DELAWARE COUNTY

Beaver, Lonzie, 1444 Providence Ave., Chester, Pa. Fishing without a license 25.00
Breneman, Witmer, 8 Harvin Rd., Upper Darby, Pa. One undersized bass 10.00
Brussels, Ralph E., 1035 Pine St., Darby, Pa. Operating motor boat without a license 10.00
Chalfant, William E., 941 Harper Ave., Drexel Hill, Pa. Operating motor boat without displaying license plates 10.00
Jedynski, George, 226 Wilson St., Chester, Pa. Fishing without a license 25.00

ELK COUNTY

Eckl, George, R. D. 1, Kersey, Pa. Eleven undersized bass 110.00

ERIE COUNTY

Troyer, Eugene, Waterford, Pa. Operating motor boat without displaying license plates 5.00

FAYETTE COUNTY

Davis, Roy, 214 E. Fairview Ave., Connellsville, Pa. Illegal device .. 20.00
Friend, Winifred, 72½ E. Fayette St., Uniontown, Pa. Exceeding creel limit 80.00
King, Francis W., 16 Park Ave., Scottdale, Pa. Illegal operation of motor boat 10.00
Randlett, Louis H., Framington, Pa. Illegal operation of motor boat 10.00
Swaney, Clark, R. D. 1, Smithfield, Pa. Fishing without a license 25.00

FRANKLIN COUNTY

Heckman, Jack E., 33 N. Earl St., Shippensburg, Pa. Exceeding creel limit 10.00
Heckman, Ray O., 210 Lurgan Ave., Shippensburg, Pa. Exceeding creel limit 10.00
Skinner, Charles A., 1136 Scotlant Ave., Chambersburg, Pa. Exceeding creel limit 10.00
Starliper, Ekmer W., Mercersburg, Pa. Two undersized bass 20.00
Weaver, Robert O., R. D. 1, Shippensburg, Pa. Exceeding creel limit 10.00

HUNTINGDON COUNTY

Huntsman, Fred A., Hesston, Pa. Fishing without a license 25.00
Thompson, Thomas G., R. D. 1, Huntingdon, Pa. Fishing without a license 25.00

INDIANA COUNTY

Burkett, Albert R., Watterman, Pa. Snag fishing 20.00
Lich, Earl J., Jr., 524 Chestnut St., Indiana, Pa. Illegal device 20.00

LACKAWANNA COUNTY

Bunnell, D., 623 Fordnan St., Scranton, Pa. One undersized bass 10.00
Evans, Ben, 305 Sessex St., Old Forge, Pa. Fishing without a license 25.00
Indian, Clarence, 511 Austin St., Scranton, Pa. One undersized pickerel 10.00
Smulek, Anna, 1124 Albright Ave., Scranton, Pa. One undersized black bass 10.00

LANCASTER COUNTY

Droney, John, 416 Manor St., Lancaster, Pa. Illegal device 20.00
Flora, Harry, R. D. 6, Lancaster, Pa. Illegal device 20.00
Leeking, Ivan W., Millway, Pa. Illegal device 20.00
Leaman, Richard, Corner N. Queen & Walnut Sts., Lancaster, Pa. Offering for sale one undersized bass 20.00
McNeal, Charles, R. D. 3, Lancaster, Pa. One undersized bass 10.00
Ruhland, John H., Gap, Pa. Operating motor boat without a license 10.00

LAWRENCE COUNTY

Augustine, Jake, R. D. 2, New Castle, Pa. Fishing without a license 25.00
Browsner, John, 465 High St., Sharon, Pa. Illegal operation of motor boat 10.00
Geer, Richard A., R. F. D. 2, Ellwood City, Pa. One undersized bass 10.00
Moore, John W., R. D. 1, Box 301, Sharon, Pa. Illegal operation of motor boat 10.00

LEBANON COUNTY

Wentzler, Andrew, 501 N. Cumberland St., Lebanon, Pa. Reckless operation of motor boat 25.00

LEHIGH COUNTY

Howeth, William P., 1220 N. 19th St., Allentown, Pa. Fishing without a license 25.00

LUZERNE COUNTY

Balchum, Joseph, 10 W. Jackson St., Wilkes-Barre, Pa. Exceeding creel limit 20.00
Eustice, James, Jr., 6 Laird St., Inkerman, Pa. One undersized bass ... 10.00
Lamoreaux, Louis, 102 Bidlack St., Forty-Fort, Pa. Illegal device 20.00
McGowen, James, 419 Adams St., Freeland, Pa. Operating motor boat without displaying license plates .. 15.00
Stesney, Edward, 1 Spruce St., Swoyersville, Pa. Exceeding creel limit 30.00
Stesney, Frank, 67 Hemlock St., Swoyersville, Pa. Exceeding creel limit 100.00
Stesney, John, 67 Hemlock St., Swoyersville, Pa. Exceeding creel limit 100.00
Thomas, Isaac, 19 W. Hollenback St., Wilkes-Barre, Pa. Exceeding creel limit 20.00
Wright, Clarence E., 202 Bowman St., Wilkes-Barre, Pa. Operating motor boat without displaying license plates 10.00
Yanchik, Mickey, 51 Poland St., Wilkes-Barre, Pa. Operating motor boat without displaying license plates 10.00

LYCOMING COUNTY

King, Joseph, 215 Academy St., Williamsport, Pa. Two undersized bass 20.00
Thomas, John D., 12 E. Southern Ave., S. Williamsport, Pa. Operating motor boat without a license 10.00

McKEAN COUNTY

Harding, Charles E., R. D. 3, Smethport, Pa. Exceeding creel limit 40.00

MIFFLIN COUNTY

Peters, Richard L., Reedsville, Pa. Illegal device 20.00
Peters, Richard L., Reedsville, Pa. Illegal device 20.00
Taylor, Harry A., Reedsville, Pa. Illegal device 20.00

MONROE COUNTY

Belkey, William, Henryville, Pa. Fishing on Sunday without permission of land owner 25.00
Flowers, Harold, R. F. D. 1, Stroudsburg, Pa. Fishing on Sunday without permission of land owner 25.00
Kolb, Harold, Shawnee-on-Delaware, Pa. Illegal device 20.00

MONTGOMERY COUNTY

Buckwalter, Charles, Sr., 139 Chestnut St., Royersford, Pa. Operating motor boat without a license 10.00
Lindsay, George E., Bryn Athen, Pa. Operating motor canoe without displaying license plates 10.00
Stewartz, Albert, 210 River Road, Pottstown, Pa. Lending a fishing license 25.00
Widner, Wilson, Hilldale, Apt. 3, Road C, Pottstown, Pa. Operating motor boat with wrong license plates 10.00

NORTHAMPTON COUNTY

Fogelman, Ralph, R. D., Walnutport, Pa. Fishing on Sunday without permission of land owner 25.00
Ortwein, Frances, 1021 Wyandotte St., Bethlehem, Pa. Operating motor boat with wrong license plates 10.00
Pavelich, Martin, 1219 Otis Place, Bethlehem, Pa. Operating motor boat without displaying license plates 10.00
Wettlaufer, John, 3213 Freemansburg Ave., Easton, Pa. Operating motor boat without displaying license plates 10.00

NORTHUMBERLAND COUNTY

Grove, Emerson, R. D. 6, Danville, Pa. Exceeding creel limit 100.00
Grove, Emerson, R. D. 6, Danville, Pa. Illegal device 20.00
Mitch, Albert, R. D. 6, Danville, Pa. Exceeding creel limit 100.00
Mitch, Albert, R. D. 6, Danville, Pa. Fishing without a license 25.00
Mitch, Albert, R. D. 6, Danville, Pa. Illegal device 20.00

PERRY COUNTY

Henry, Raymond W., R. D., Blain, Pa. Possessed ten trout before season opened 100.00
Henry, Raymond W., R. D., Blain, Pa. Possessed four trout before season opened 40.00
Henry, Raymond W., R. D., Blain, Pa. Fishing without a license 25.00

PHILADELPHIA COUNTY

Brooks, Rebecca, 1509 N. 27th St., Philadelphia, Pa. Fishing without a license 25.00

Coleman, Sarah M., 1509 N. 27th St., Philadelphia, Pa. Fishing without a license 25.00
Cushin, John J., 448 Flamingo St., Philadelphia, Pa. Fishing without a license 25.00
Desson, James, Director Camp Sun Mt. Inc., Room 305 Market St., Philadelphia, Pa. Drawing down dam without a permit 100.00
Miglionico, Charles, 6621 Greenway Ave., Philadelphia, Pa. Transferring fishing license 25.00
Wayne, James, 1231 S. 17th St., Philadelphia 46, Pa. Fishing without a license 25.00

SCHUYLKILL COUNTY

Bestwick, Albert, New Penn Hotel, Pine Grove, Pa. Refused to show license 25.00
Kosak, Joseph, Coaldale, Pa. Fishing on Sunday without permission of land owner 25.00
Lickman, John, 94 Water St., Silver Creek, Pa. Illegal device 20.00
Radziewicz, Ben, 122 S. Main St., Pine Grove, Pa. Fishing without a license 25.00
Schleicker, Clarence W., Tamaqua, Pa. Operating motor boat without displaying license plates 10.00

SOMERSET COUNTY

Lambert, Newton, Holsopple, Pa. One red-leg terrapin in closed season .. 10.00
Mahl, Sheffey O., R. F. D. 2, Boswell, Pa. Illegal device 20.00
Mull, Charles, Jr., R. D. 5, Somerset, Pa. Ten undersized trout 100.00

UNION COUNTY

Koch, Jonas E., R. D. 1, Milton, Pa. Operating a motor boat without a license 10.00

VENANGO COUNTY

Comfort, Harold E., Star Route, Franklin, Pa. Operating a motor boat without license plates 10.00
Eldred, Thomas B., R. D., Polk, Pa. Operating a motor boat without license plates 10.00

WARREN COUNTY

Sanden, Emil C., R. D. 2, Akeley, Pa. Trolling from motor boat while in motion 20.00

WASHINGTON COUNTY

Hudak, John, Jr., Box 249, Meadowlands, Pa. Illegal use of Dealers License Plates, plates not being used for demonstration 10.00
Kent, David, Elco, Pa. Operating motor boat without lights at night 10.00

WESTMORELAND COUNTY

Cain, Rockwell, R. D. 3, Mt. Pleasant, Pa. Operating motor boat without license 10.00
Fennell, James S., Salina, Pa. One undersized bass 10.00
Fogle, T. E., 105 North St., New Kensington, Pa. One undersized bass .. 10.00
Rauth, George W., Van Meter, Pa. Illegal operation of motor boat 10.00

WYOMING COUNTY

Bailey, S. J., Nicholson, Pa. Drawing off dam without a permit 100.00
Rossar, Chester, Lake Carey, Pa. Reckless operation of motor boat .. 50.00
Skovronsky, Otto, Tunkhannock, Pa. Five undersized pike 50.00

YORK COUNTY

Beaver, George, 730 S. Duke St., York, Pa. Fishing without a license 25.00
Crafton, Raymond A., R. D. 1, Red Lion, Pa. Operating a motor boat without a license 5.00
Long, Ralph H., Wellsville, Pa. Illegal operation of motor boat 5.00
Spangler, Paul R., 601 Maryland Ave., York, Pa. Operating motor boat without a license 5.00
Zinn, Eli Z., 705 W. Market St., York, Pa. Operating a motor boat without a license 5.00

OUT OF STATE

Ross, Irwin, 1201 Spruce Ave., Wilmington, Del. Fishing without a license 25.00
Weil, James, Bernham Ave., Lansing, Ill. Fishing without a license 25.00
Corbin, James, Natchiteches, Louisiana. Fishing without a license 25.00
Corbin, Joyce, Natchiteches, Louisiana. Fishing without a license 25.00
Archibald, George W., 78 Buck St., East Orange, N. J. One undersized bass 10.00
Geant, John Arthur, 207 N. Broadway, S. Amboy, New Jersey. Operating motor boat without a license 10.00
Giegold, John, 500 Bergen Ave., Jersey City, New Jersey. Operating motor boat without a license 10.00
Hyde, W. Dennett, 665 Hillcrest Blvd., Phillipsburg, New Jersey. Operating motor boat without a license 10.00
Fenton, John J., 4960 Broadway, New York City, New York. Fishing without a license 25.00
Kocherhan, John W., 143 Washington Ave., Brooklyn, New York. Fishing without a license 25.00
Kutch, John, 97 Eagle St., Brooklyn, New York. Giving false information to secure a fishing license 25.00
Meyer, Edward, 1165 Main St., Old Forge, New York. Fishing without a license 25.00
Keller, Ralph S., 12905 Willard St., Cleveland, Ohio. Operating motor boat without a license 10.00
Meyers, Richard C., 685 McQueeney Ave., Akron, Ohio. Giving false information to secure a fishing license 25.00
Racer, Gerald E., Cincinnati, Ohio. Fishing without a license 25.00
Smith, Kenneth W., 1929 Elsmore Ave., Dayton 6, Ohio. Fishing without a license 25.00
Jaco, Fred B., 600 Division St., Parkersburg, W. Virginia. Fishing without a license 25.00
Maxwell, Raymond, Morgantown, W. Virginia. Fishing without a license 25.00

A teacher called on little Oscar.

"Tell me what you know about George Washington. Was he a soldier or sailor?"

"I think he was a soldier," replied Oscar.

"Why do you think he was a soldier?"

"I seen a picture of him when he was crossing the Delaware and a sailor knows enough not to stand up in a rowboat."

THE CATTAIL

By ROBERT LEO SMITH

The cattails grow along the quiet shallows of the stream. In summer their glossy leaves shimmer in the sun but in winter the stiff stalks and broken leaves stand starkly in the snow and ice.

The flower heads that rise stiffly above the broken leaves first appeared in June. If you looked closely at them then, you would have noticed that they were made of two closely adjoining sections. The upper halves, yellow in color, were the male or staminate flowers, and the lower halves were the olive-green female or pistillate flowers. Pollen from the upper halves of the cattail spikes was carried by the summer winds to the pistillate flowers in the area. Their usefulness over, the staminate flowers shriveled and the pistillate flowers fluffed out into the beautiful chestnut-brown cattail head. This is the fruiting part of the plant.

Throughout the greater part of the winter the cattail spikes stand erectly above the broken streamside vegetation, but toward spring they become shaggy as a quarter million seeds from each of them are scattered by the wind.

Cattails mean food and home to many creatures. Redwing blackbirds and marsh wrens build their nests and feed their young in its tall growth. Snipe and rails seek them as a hiding place. The muskrat feeds on its roots and builds its lodge from its stems and leaves. An insect, the cattail moth, lays its eggs in the flower head. When the larvae hatch, they bind the spike with silk to preserve the seeds for their food and protection. These spikes, frayed out two to three times their normal diameter, furnish a cozy winter home for the larvae and a place where they can spin their cocoons in the spring. The spikes containing the larvae do not lose their seeds in the spring as do the others, but remain intact until they break off during the summer.



The Paramecium

By CARSTEN AHRENS

This is the first animalcule that most beginning students in biology classes around the world usually see. And their amazement at the myriads they find in a spoonful of a rich paramecia culture is profound. There are many different species of these creatures, but all of them are most minute; they are only from .2 to .26 mm. long. They serve as food for many of the larger protozoa as well as for other water animals all the way up the animal kingdom. But in spite of their predators, they are found in abundance in almost any water unless it is too hot or to acid. They are often found in water that is so polluted that other one-celled creatures suffocate.

Locomotion

This slipper-shaped animal is lined with oblique rows of tiny oar-like processes called cilia. The beating of these cilia gives them locomotion. The animal has no ears or eyes, so it locomotes like a sightless man in a blind alley. When it meets an obstacle, it reverses and strikes out in a new direction. It continues in this direction until it meets another obstruction. Again it goes into reverse, pivots itself on the posterior end, and makes a new start at another angle. If it gets into serious difficulty, it throws out its trichocyst. These are a layer of rods, just below the cell membrane and perpendicular to the surface, that can be thrust outwardly. In the laboratory the paramecium will discharge these rods if it encounters strong acid or electric shock.

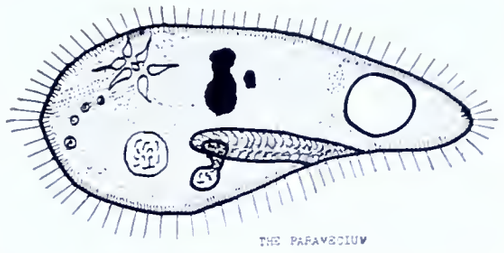
In addition to its forward and backward locomotion, the animal constantly rotates on its long axis as it travels. This is probably due to the position of the cilia that are placed in oblique rows, and this causes the creature to spin about as it spirals along.

Food Getting

The paramecium is one of the first animals to have a mouth. This lies at the end of a groove that runs down the side of the body. Around this groove are longer cilia than are found elsewhere, and their powerful beat undoubtedly assists in sending the body swerving on its spiral way. But their chief function is to round up food, and the paramecium will eat while swimming or at rest. While swimming, because of the stronger beat of the cilia in the oral groove, a vortex of water swirls along this lane which leads to the mouth. Food particles are carried in this current to the gullet. But they love to eat while at rest. Large numbers of individuals will gather about a mass containing bacteria, like boats around a pier or pigs around a trough. The body cilia stop beating. Some of the cilia are pressed against the mass, perhaps acting as anchors. The cilia in the groove beat actively, carrying the food which dissociates from the mass to the mouth.

Reproduction

Reproduction in the paramecium is nothing short of marvelous. If the water is cold and the food just so-so, one of these slipper-shaped creatures will become two in twenty-four hours. If the water is warm and food is plentiful, cell division will occur in about twelve hours. When the animal grows to its maximum size, it separates into two parts.



THE PARAMECIUM

The heel of its slipper-like self turns one way, the toe turns in the opposite way, and the paramecium actually twists itself in two. This rapid reproduction accounts for the fact that very few waters of the world are without these one-celled organisms.

After four or five months of this rapid cell division, the process slows down and actually stops. The paramecium is old, and unless it can be rejuvenated, it will die. This restoration of youthful vigor is called conjugation. Two old paramecia join themselves side by side. Through their cell membranes, they exchange parts of their simple interior mechanisms, and this act seems to be a powerful elixer. For after the two separate, each is young again, active, energetic, and reproductive. There needs be no death for paramecia; conjugation, for some unknown reason, brings youth.

Try and Find These in Webster's

Guide—A true conservationist in disguise. His duty is to take you fishing where they ain't. To encourage you to come again next week when the water is lower, or higher, or clearer, or wetter.

* * *

Worms—Greatly scorned in writings and in public, but used widely and sometimes secretly by most trout fishermen. A few hardened anglers, unmindful of public opinion, brazenly admit their use. Outstanding among these is a President of the United States.

* * *

Plugs—Imitations of bananas, dill pickles, darning needles, bugs, birds, bees and animals. Now manufactured in many alleged lifelike shapes and primarily designed to fool the fisherman and lure a dollar from his pocket. However, authentic records show many feeble-minded fish have been taken on these lures.

* * *

Bait—A secret word of the fishing fraternity for a highly exhilarating beverage carried on the hip. It will remove varnish, counteract cold and heat as well as snake bite, bad luck and that tired feeling or what have you.

* * *

Fish—The prize that grows the fastest between the time it is caught and the time the catcher describes it to his friends.

* * *

Boots—An effective means of carrying a large quantity of water from the stream to a log. Guaranteed to keep the feet hot in summer and freezing cold in winter. Waders, often worn by fishermen, hold more water than boots and are therefore preferred for extinguishing campfires.

* * *

Fish Line—An expensive piece of string. It gets snagged, snarls, and is sure to break at the right time, thereby creating the alibi for the whopper that got away.

Preserve Fish Between Lake and Skillet

Avid anglers insist that there is no finer treat for the palate than a meal of freshly-caught fish. Despite his desire for the delicate flavor of fresh fish, however, the average fisherman annually wastes many thousands of pounds of fish through careless handling of his catch.

Without thinking, he blithely tosses stringers or creels into his car for two or three-hour rides home in the blazing sun or during the hot nocturnal hours.

Not only does the fisherman deprive himself of valuable meat, but he is guilty of waste in several respects and often defeats the whole purpose of his fishing trip.

Connoisseurs of seafood contend fish must be cooked and served promptly after they are caught, otherwise the flavor is impaired, and in some cases the fish is entirely spoiled. Veteran fishermen claim, however, that fish need not be prepared for eating immediately if they are properly preserved between catching time and the skillet.

There are several ways properly to handle caught fish so that they retain a fresh flavor. One method is to clean them as soon as they are caught or at least remove the gills and entrails. Green grass or water plants may then be stuffed into the cavity and each fish should be wrapped individually in burlap or water lilies. If a creel is available the fish may then be placed inside and sprinkled lightly with water.

Another method of preservation is to place the cleaned fish in chipped ice. However, it is often difficult to carry ice along on a fishing trip, and the wet burlap treatment will accomplish almost the same thing if kept moist and in a place where the air may get to it. Natural evaporation will keep the fish about 20 degrees cooler than the surrounding air.

If the fish are to be transported for any great distance, they should be cleaned and kept on ice, but never permitted to touch the water from the melting ice. If they get wet, they will become waterlogged and tasteless, ridiculous as it seems.

As long as the fish are alive they may be kept in the creek or stream, tied to a root or slung over the side of a boat until the angler has finished for the day.

Fish carried home dry on stringers will become strong in flavor and scaling is more difficult then when kept moist, but not wet.

With a little extra care, fishermen will save many pounds of delicious eating and protect that fresh-caught flavor.

Heads Pymatuning Group

Robert L. Walker, a lawyer of Linesville, Pa., has been elected president of the Pymatuning Lake Improvement Association succeeding Fred Payne of Andover, Ohio. O. E. L. Wickliff, chief of Ohio's fish management, in a speech called Pymatuning one of the most improved fishing spots in the country. He promised Ohio's continued cooperation with Pennsylvania in the management of the lake.

When everything else seems impossible try a big night crawler cast across stream and floated down for small mouth bass.

THE YELLOW PERCH

(*From Page 8*)

willing to feed, and this keeps them active when other fish are playing coy and hard to please, or else are sulking in semi-hibernation. Furthermore, the perch will take almost any kind of bait or lure. In fact, their greedy feeding habits make them undesirable in some lakes where they are too abundant because they compete too much with bass for the food supply.

Small minnows are one of the best of all yellow perch baits. Hook the minnow through the back right under the top fin and you can strike as soon as the perch hits. There's nothing uncertain about the way they strike a bait or lure. They really hit it. You will have to find the depth at which they are feeding by experimenting. Once you have caught a perch, you can pause there and fish because others most certainly will be around.

Worms also are good, but take your own along if you are going to fish some of our northeastern lakes because worms are scarce in the rocks and gravel around their banks. As for other baits, you have a wide choice because they will take crickets, grasshoppers, the larval form of the dragonfly which is called a "bass bug" in Pennsylvania, grubs, pieces of fresh water mussels or the bright fins of other yellow perch, cut off and put on the hook.

Since I always expect bass to be their next door neighbors, I always use a fairly large strong hook when fishing for yellow perch. Not huge, but say size 6 or 8, and when I employ streamers I usually have a smaller size 10 hook. In the evening when they usually feed in the shallows, it's a lot of fun to toss a cricket or grasshopper near the bank or among spatterdock or lilly pads, or to work a streamer in the same location.

It's difficult to suggest any particular flies or streamers, but I like the Edson Tigers for yellow perch, either Light or Dark Tigers, and next to them I prefer a streamer with a bright tinsel body and some bright colors such as the Mickey Finn. If you have streamers with straight eyes, use a spinner ahead of them. You will find the small willow leaf blade works best in the quiet water where perch are usually found since you must give it all the action it will have and the narrow blade revolves at the slightest twitching of the rod. I think streamers are better than flies for exactly the same reason that minnows are the best bait —the streamers look like minnows. However, yellow perch will take wet flies and often rise to a dry on the surface. Remember, they are quite willing to help you catch them!

It's co-operation with the anglers and the fine flavor of its firm, white flesh are on the credit side. On the debit side are several things. One has been mentioned earlier, their tendency to overrun a pond sometimes and force out other fish, and induce a condition of runtiness in their own ranks through over-population. They will steal bait intended for bass, and they eat the young fry of other fish. In addition, they are sometimes subject to parasitism and the cysts in the flesh make cooks fight shy of them.

Finally, I don't know of any other fish in our waters more difficult to scale. Scales stick to their skin with great affection and come away only after the application of much energy and cursing. However, it can be made a fairly easy job by dipping them briefly in scalding hot water, or by pouring steaming water over them from a kettle, taking care not to cook the flesh partly in the process.

All in all, though, their good outweighs their bad, and I, for one, would be sorry to see this most colorful fish in our waters disappear from the Pennsylvania scene. But it is not likely to do that unless it eats itself out of hearth and home.

Smart Guy: I had to get rid of that new secretary of mine.

Innocent: "Why? No Experience?"

Smart Guy: "None. When I told her to sit down, she looked around for a chair."

John Crowe

in the Johnstown Tribune

Again the legal minimum size of a trout in the creel is six inches. Every year, I hear many stories of unreasonable arrests by wardens, resentful accounts of fines imposed for the possession of a 5⅞-inch fish, a fish that was 6¼ inches when it was caught, but shrank, and other unreasonable enforcements of the law.

Among fishermen exists a time-honored belief that after a trout's removal from the water, that trout shrinks appreciably. Not only trout but other fish are supposed to shorten a lot after a few hours in the creel or a day or two in the refrigerator. It has always been convenient to have it so in telling friends about the big 14-incher caught the day before. But when friends came to see the fish and were both unmannerly and skeptic about the measurement, insisting upon borrowing a ruler, it was a bit embarrassing. By the time your friends saw it, that fish might have shrunk from 14 inches to 12. I've known an 18-incher to shrink to 15 and a 22-incher to 18—seems the bigger the fish the more it shrinks. In the eyes of your friends you appear the traditional angling prevaricator; you both laugh and no harm has been done.

But when the warden is the man who is measuring those doubtful trout, the shrinkage story may not have so happy an ending. A trout is six inches long or it isn't, and if a warden is unreasonable in making an arrest because a fish is just a little undersize, he is no more unreasonable than the fisherman who kept that fish.

An outdoor mag a few years ago published an article on just how much fish do shrink. Experiments showed that fish do shrink—but ever so slightly. Shrinkage of small trout, in the six to seven-inch range, appeared in terms like 1/16 and 1/32 of an inch.

Brother It's Your Own Darn Fault!

By VINCE COSMARK

The last time I went fishing in my favorite Bedford County, Dunnings Creek to be exact, my friends and I came upon a few fellow fishermen, and started to chew the fat. Suddenly one of the fellows said "I hear they are going to close the Cumberland Dam." When I heard this it brought to mind a little incident that happened to me a long time ago at the dam. I was fishing and enjoying myself when about five feet away I saw a frog floating on top of the water. Suddenly a fellow near me picked up a dirty rusty old bait can and gave it a heave at the frog. The can and frog disappeared in the water. I said to him "That wasn't a nice thing to do, throwing something like that into the water. People have to drink that water; if you and others keep it up they will close this dam to fishing." "Yea, they can't stop us from fishing, besides do you own this dam?" Well I could see that there was no use talking to a nut like that. I fished a while and then we went home. Acts of this kind are just what close public fishing waters. The owner puts up fences and employs guards and they have a perfect right to do this.

Near my home is the Hinckston Dam and the Quemahoning Dam both of which are closed to fishing. The reason no fishing is allowed in these dams some old timers tell me: is that in Hinckston Dam, they were permitted to fish until they started to throw cans, bottles, papers and refuse into the water. Three times the signs were posted, and to which the fellows paid no heed. So they stopped them from fishing the dam proper. They could fish from the bridge in an eddy. Boy you should have heard some of the names the Company was called, all the while the men were still fouling the water. After night fishing they even dumped the carbide in the water. It wasn't very long afterward that the owner changed the course of the road and you can still fish there provided you like fishing in clear 5 inch water.

Now those same fellows who wouldn't listen to a word to the wise; yow, do they ever holler. The company this and the company that. You can't blame anybody at all. BROTHER IT'S YOUR OWN DARN FAULT!

THEY DON'T WAIT TILL FRIDAY

(*From Page 3*)

their surroundings; their streaked plumage as well as the position the bird assumes blending perfectly with the background of grasses or sedges. Only last summer Bob Ford, the well-known nature photographer, reported an unusual observation. While intent on photographing a nest he had located, almost accidently he spied one of the parents in among the coarse grasses of the boggy field. It was perfectly "frozen." Suddenly, the fitful breeze which had been blowing most of the day caused the grasses to wave rhythmically. Much to the onlooker's astonishment, the bittern took up the motion of the waving vegetation, and in perfect synchronization continued its *hula* as Mr. Ford called it, until the breeze once again subsided.

These three members of the heron family albeit distinct species, are the so-called "shitepokes" of the uninitiated rustic, and no few uninformed fishermen as well. Their familiar squawks and other guttural sounds would be sorely missed from scenes dear to the heart of every angler.

Other species of avian fisheaters may be grouped as 1) transients which cross our state *en route* to summer or winter homes, 2) those whose diet includes but occasional live fish, 3) rare visitants or those whose numbers are so few as to be considered accidental occurrences. Representatives of all three groups include grebes or helldivers, loons, egrets, herons (other than those discussed), cormorants, coots, gallinules, rails, gulls, and, of course, the bald eagle.

It may prove interesting to note that although the bald eagle is an excellent fisherman it seldom exercises its skill. Whenever possible it prefers to hijack the ambitious osprey or feed on long-dead fish. For all its regal bearing and majestic flight the bald eagle is hardly more than a glorified buzzard. One often wonders why this bird had a bounty of a dollar fixed on its head for its alleged depredations on the salmon schools of the Pacific. If you are up on your history you may recall that in the discussion which ensued in selecting our American emblem, Benjamin Franklin strenuously championed the wild turkey He was doubtlessly aware of the eagle's bad traits. However, there is no question but that the magnificence of the eagle's flight as well as its apparent aloofness as it circles the blue were factors in its favor.

For all their dexterity of flight it is seldom that a herring gull will pick up a live fish. Of course if the fish is crippled or otherwise incapacitated, then, it's another story. Neither do they hesitate to greedily snatch up quantities of small fish when schools of them are surfacing. Gulls as a whole are extremely catholic in their tastes, being equally delighted with picking up worms, insects and even field mice in the wake of a gangplow or in sharing garbage with the pigs (or bears of the Yellowstone as is their wont; their antics at the various garbage dumps throughout the park, being fully as amusing as any staged by bruin).

It is quite understandable then, that the fish destroying propensities of birds depend almost entirely on factors already discussed. Where there has been little or no interference by man, and



The osprey is probably the most skillful and certainly the most spectacular of all winged fishermen. This one has just settled on its aerie located on the shores of Pymatuning Reservoir.

the various components comprising the natural balance are undisturbed by some circumstance (usually an overproduction or the wiping out of a species), the normal activities of feathered fish predators cannot be considered harmful. However, it should be pointed out that even under the very best conditions they may pirate what man considers his very own. And in justice to the birds concerned, the word "pirate" is used advisedly, for despite their fishing skill it is doubtful if they can tell a trout from a dace.

In most cases man does not begrudge the few valuable species which birds pick up. Indeed, any one deserving of the name *sportsman* is fully aware that fishing birds have a priority antedating that of their earliest human counterparts.

Orders to Construct Plants Issued to Town by Board

Orders to construct a sewage treatment works have been issued to the city of Greensburg and to the boroughs of South Greensburg and Southwest Greensburg. Under the order the treatment works shall be constructed and placed in operation on or before September 15, 1951.

The city and the two boroughs had joined in submitting plans for a single plant for the treatment of sewage. Those plans, submitted to the Bureau of Engineering, Department of Health, were approved and a permit for the treatment works issued on November 25, 1947. In addition to other factors the order now issued requiring the construction of the works is based upon a change in conditions which had existed in the area.

It is pointed out that the municipalities discharge sewage untreated to Jacks Run and its tributaries and because of the limited size of the stream and the fact that mining operations have been curtailed with resultant limited mine water discharged to the stream, the untreated sewage is now causing a gross stream pollution at times in parts of Greensburg and below that city. It is further stated that when the Jamison Coal & Coke Company mine is permanently abandoned and dismantled, which is now in process, the mine will be flooded and no mine water will be discharged to Jacks Run above the Municipalities which will make more pronounced the effects of sewage from the municipalities on the stream. Similar orders have been and are being issued to municipalities in other parts of the State.

Progress Being Observed

Observations are being made by the Bureau of Engineering, State Department of Health of the progress being made in the installation of a waste treatment system at the plant of the Durham Paper Board Company, Durham Township, Bucks Co. officials of which were recently taken to court in Doylestown charged with pollution of the waterways to which they pleaded guilty. On their promise to the court that the waste treatment works would be placed in operation within two months from September 15, President Judge Hiram H. Keller did not impose a fine but placed the costs of prosecution upon the defendants.

Action against the Company was brought by Henry Lowe Brownback, Norristown, a member of the Sanitary Water Board. The charges were made as a result of the failure of the company to comply with the Board's orders to abate pollution.

Those against whom the charges were made and who pleaded guilty in the court action are Anthony DeSidero, Thomas DeSidero, John R. DeSidero, officials of the company which has headquarters in Newark, N. J. and Superintendent Peter Ferrara. During the trial Judge Kellar declared "as president of the company it was your duty to know what was going on," after Anthony DeSidero offered the plea that he had not been informed by his superintendent of the orders of the Board or of the pollution situation.

Lakes of North-East Pennsylvania

By JOSEPH A. YANCHIK

Long Pond

Located in Wayne County, Pennsylvania, this lake is without a doubt the most intensely fished of any lake in the Pocono Mountains. A short distance above Loughran's Pond and a sharp curve to the dirt road on your left, takes you to this lake. This road is about a mile long and is rocky and bumpy. Extreme care must be exercised around its many curves. As your car enters the area where the lower lake with its swamps and bogs stands like a mirrored pool of water, the road comes to a steep hill where extreme caution in driving is very desirable. Over this knoll you come to the lake proper; Long Pond.

The name Long Pond is very appropriate. It is very long but not very wide. Being privately owned, its owner tries his best to please his many fishermen friends. The case at this lake is too many fishermen and not enough boats to go around. If you arrive there very early in the morning it maybe possible to get boat accommodations but that is not guaranteed. The boats are in fairly good shape. There are about two dozen boats handy. The price for fishing is $1.00 per person. Shore fishing is taboo.

The entrance to the lake is muddy and scummy with algae. The water is not very deep at the entrance and you can expect to land on a submerged stump unless you know the narrow channel that leads to the dock. At the extreme end of the pond the water widens and it is loaded with stumps and dead trees. Here the water is shallow but clear. The bottom is muddy and blue gills, catties and bass seem to like it here. You will sacrifice many fish hooks and other gear on this lake. The middle of this lake contains floating islands and it is near these that the water is quite deep. Here, most of the pickerel fishing is attempted. These islands are treacherous and though they look inviting they are traps with nothing but water underneath and grass on top. Heavy woods line both sides and it is not unusual to see deer cavorting within the timbered lands.

The fishing is fair to good, at times. In the shallower water some nice perch will keep you busy as well as an occasional pickerel which hides under the moss covered stumps. You have to bring your own live bait. We used worms exclusively and caught about every specie in the lake including shiners. This shallow spot gave up plenty of action. Our worms were running out fast even though we were fishing in about three feet of water. We didn't know about this particular spot until we got our boat snagged on top of a stump and just parked there. Immediately our lines were in action and the bobbers were disappearing under the water quite frequently. First the perch, then the pickerel and also the blue gills took our hooks. This was action at its best until we ran out of worms. We had a fine creel and the fish are tasty from this pond. I saw several nice bass taken.

This is a very wild lake and it is difficult to get off of it except at the entrance. Hundreds of logs, limbs, stumps and weeds line its shore. Wild bird life is much in evidence and last year, egrets lined the shore. There must have been hundreds of them.

Lavatory facilities are available and there is lots of parking space.

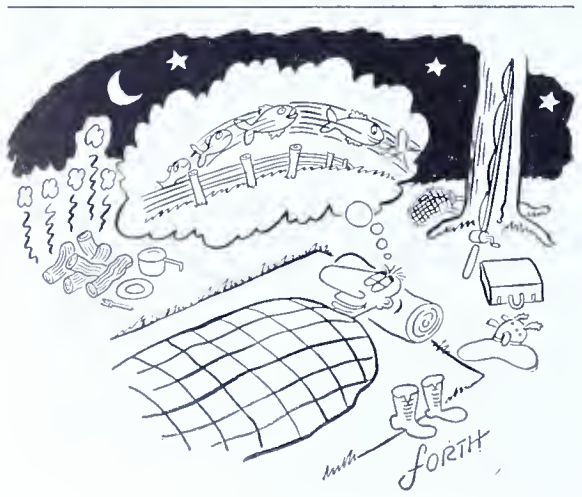
Incidentally, this lake is stocked from the lower pond which I mentioned in the beginning of this article. Keep away from there. Long Pond is a pretty lake and the fishing is very interesting at times.

Loughran's Pond

This is a private lake. The boats' rental is $1.00 per person. These boats could be replaced with newer ones or should be repaired for security reasons. Like many private lakes this one's boats are of ancient vintage. They are of a low draft and one can easily take a spill from them and standing up is a hazardous job in that type of boat.

The lake is long and narrow. The water rarely reaches a maximum depth of ten feet while some parts of it are very shallow. The lake is heavy with scum and the water is rarely clear enough to see the bottom. The shore line is strewn with old fallen trees and stumps. At the entrance to the lake, especially on the right shore line are many lily pads and the water is cloudy with green conferva. This genus of freshwater algae, forming slimy masses or tufts in ponds and stagnant pools, is easily recognized by their unbranched filaments. On the right of the entrance to the pond are several deep spots which I have fished with some success. At the extreme end of the right side of this pond are many fine fishing holes. Floating logs, weeds and roots are strewn about in reckless abandon. You will lose plenty of hooks in this lake whether you fish deep or shallow.

Practically all types of fish are caught here. The bass are not very large but they are fat and scrappy. Rock bass run to a fair size. Perch are plentiful and occasionally some large ones are caught. In the upper reaches of the lake some nice size blue gills hit your line and when they are active the sport is fine. The pesky—little sunnies will drive you to distraction until you hit a spot where the bigger fish lie. To give you an idea of how tiny these little sunnies are and how they chase your worms; one of them leaped at my hook as I was reeling it in and swam for it right over a lily pad. He missed the hook but remained on a big lily pad. There he remained. He wasn't any more than an inch in length and I had to push him off the pad into the water. I have not seen any pickerel taken from this lake but I understand that there are some there.



Last October on the 31st three of us fished Loughrans and we caught a nice mess of fish. The forests surrounding the lake had already turned color and we sat on the lake in the most colorful surroundings one could wish to be in. The brilliant hues of the tall trees cast their reflection on the lake and our lines, as we cast them, seem to cut across water that was colored with paints.

To get to Loughran's Pond is easy. It is on the main highway to the Wilson Dam, Lake Wallenpaupack, Wayne County. The lake adjoins the highway and there are spaces for at least twenty cars on the ramp. I would consider this a pretty good fishing pond. The young man who takes care of the boats is a personal friend of mine and he will do his darndest to get you the best boat available if you get there early enough. May I add that the best perch fishing in this lake is at the extreme end of the pond among the stumps. The water is quite deep there and the hump backers run up to 15 inches. That's a good sized, good eating fresh fish.

Little Egypt Dams

Pike County, where our famous Governor, Gifford Pinchot, lived most of his eighty years, has many lakes. Among these are twin lakes called the "Little Egypt Dams." These twin dams were once used by the state for the propagation of fish. Now open to public fishing, these dams are not far from Fairview Lake. You cannot take your car near the dams. You must walk about a quarter of a mile before you arrive at the first of the twin dams. This dam is not very large and is filled with an assortment of algae and weeds that grow quite high. The trees hug this dam very closely and you must fish off the large rocks to avoid entanglements with pesky branches. The water is shallow and abounds with small sunfish left there to grow to some pretty large catches. Occasionally, a large pickerel darts through the green scum and the little fish scurry away in straight, swift lines.

On the other side of the first dam lies the other twin lake. To get to it you must cross a stone covered outlet over which flows the water from the first dam. You need boots to get across this unless you are willing to risk a rattler or two barefooted. This other dam has a large dirt embankment impounding its waters. A small opening permits the water to flow over to a ravine below. We saw some big rattlers down there. The dam is much larger than its twin but there were no boats available. You can take your own boat, there, I understand. Potentially, these dams are worth watching. The nature of the land, the in-

accessability to the water's shore make it a tough lake to fish but there are big pickerel there I am told. Each side of this second dam has tangled vegetation and large boulders which extend into the water. Dead trees, fallen by the might of storm or erosion, extend into the lake. You can walk on them if you care to risk a soaking and get almost into the middle of the dam.

Both of these dams are simply teeming with frogs of all sizes. They would snap at a red fly or a red plug with reckless abandon. I have never seen so many frogs in one place and their "Kerchugs" were loud and furious. One big fellow sat on a log and had a voice that was the closest imitation to a tuba that I have ever heard. And now and then, a large, black water snake slithers from a tree into the water.

They weren't biting so well that day so we spent most of the time picking huckleberries. There was no pleasure in this work. Did you ever pick a rattler up in your bare hand? Lots of them at "Little Egypt."

Ever Shake Hands With a Beaver

That stream's temperature was just above the freezing point—and it didn't take him long to seek the shelter of his car. From where I stood I could see the exhaust pouring out smoke, indicating that his first thought had been to turn on the heater. But on a good trout stream all the interruptions aren't of human origin. Ever shake hands with a beaver?"

Well, I didn't do exactly that but one day in May, this year, I stood at the head of one of the most productive holes in the West Branch of Tionesta Creek, coaxing a salted minnow JUST the right place for a strike. However, a dark shape welled up out of the depths and held itself steady against the current only a few feet away. It was Mr. Beaver himself. For several minutes we "eyed" each other without a motion.

Finally, out of just plain mischievousness I flicked my 7-foot rod and bounced the delicate tip off the end of the beaver's nose. After slapping the water with his tail (actually the "slap" occurs after his head is under water) he made watery tracks out of there and I didn't see him the rest of the day.

Only a few minutes (and several nice trout) later, while standing in the same spot, a motion on the bank caught my eye. Turning slowly I stared right into the roguish face of a weasel emerging through the front door of a burrowing which some mouse called home.

On the same stream I have seen bear tracks, wild turkey tracks, have flushed many grouse, surprised watering deer with their fawns, and have witnessed many wildlife dramas which I wouldn't trade for any consideration. Several times I've been forced to kill rattlesnakes, but these encounters weren't really pleasant.

However, the season has been a good one—and I hope that talking about it today in this manner has served as a tribute to every man's trout fishing experiences and possibly has stirred in those who haven't tried it the desire to be on hand when next April 15 rolls around and the 1950 chapter begins.

About Frogs

The bullfrog does much more than just sit on the bank of a stream or lake or a lily pad, and bellow. He puts up with a routine of life much like the rest of us. Even if he is a cold-blooded vertebrate, he has his moments. During the warmer days of spring he emerges from hibernation in the bottom mud of creek or pond and goes forth with one eye peeled for food and the other for a mate. Chances are he won't readily see a mate so he sets to work calling for one.

His croaking, or bellowing, is produced by forcing air back and forth between the lungs and the mouth cavity across the vocal chords, which are stretched on either side of the larynx. Scientists say that his "music" is primarily a mating call, but the bullfrog continues his racket through much of friends know that he's still around.

While mating, the female bullfrog lays her 10,000 or more eggs in a gelatinous film on the surface of still water. Upon hatching, the frog is a familiar character known as a tadpole. At first, the tadpole resembles a small fish, and, for that matter, lives much like one. It even has gills which, during final transformation, conveniently convert into other useful organs. There are various stages in tadpoling—the creature adds legs, absorbs its tail, and comes to look more and more like a frog. Since there are many kinds of frogs, there are differences in tadpoles. It's rather hard to tell them apart, but if you find a tadpole over three inches long you can almost bet that it is a bullfrog—or will be. The bullfrog spends two and sometimes three years as a tadpole, and another two years to mature in size.

The bullfrog is a useful creature and perfectly harmless. His tongue is long and sticky and he has a trick of flipping it out to snatch mosquitoes, flies, and assorted bugs before the hapless insects know what is going on. He has a voracious appetite and consumes enormous quantities of these pests. He eats other things, too—swallows them whole, and depends upon his innards to digest them. One frog hunter reported cutting a frog open and finding a tiny live turtle. The frog's lack of discrimination to any moving meal-sized object is often known to snap up a bare fish hook dangling before his eyes without giving the matter due consideration.

Pete McGillan

in the Petersborough Examiner

People scoffed when stylists talked about the "New Look," but they didn't figure on the peculiarities of females, so the so-called "New Look" is apparently here to stay—drat the stylists. When anglers first heard about spinning reels, the die-hards said "Nothing can ever surpass the level wind." Well, I doubt if any reel will, but spinning reels are here to stay too, and you can put this on your cuff, every man who can afford one of these devices will buy one. The average angler will probably own a level wind reel as well, but once he sees a spinning reel in action, and watches open-mouthed as some joker lands a six pound bass or a ten pound muskie on a seven-pound test line, then he's sunk, and if wifie doesn't watch close, he'll be raiding the sugar bowl or teapot and stealing the milk and bread money.

The spinning reel so far as can be traced was first invented in 1902 by an Englishman who got the idea by watching the operation of cotton spindles on a spinning frame. If you have ever worked in a textile mill, you know how readily yarn whips off a spindle. Some historians will disagree and say the French have been using this same type reel for 75 years. Who cares? The reels are now being made in the thousands in the States. Joe Bates, Jr., in February issue of *Outdoors* describes the reel nicely, he writes "All true spinning reels operate on the same principle. Each has a non-rotating line drum, so constructed that its axis is in direct line with the direction the cast is to be made. This is why the fine thread line pays off the drum without any appreciable or frfiction. The spool does not rotate, so all the force of the cast is directed to shooting out the line, and none to starting the reel spool in motion. Since the reel spool is not in action during the cast it cannot override, and thus cannot backlash."

This reel permits unusually long casts with very light lures, and because the reel has a slipping clutch, neither the angler nor the fish can exert greater tension than the line's breaking strength. In short, if the angler is reeling in a fighting fish, the reel continues to pay out line, even as it is being taken in, sportsmen's shops should have plenty of these new reels on display.

A sinner is a stupid person who gets found out.



They really turn out to stock fish when the tank trucks arrive in Jefferson County. Above is a group of Henderson Township Outdoor Sportsmen's Association and the Big Run Sportsmen's Association upon such an occasion out Punxsutawney way.



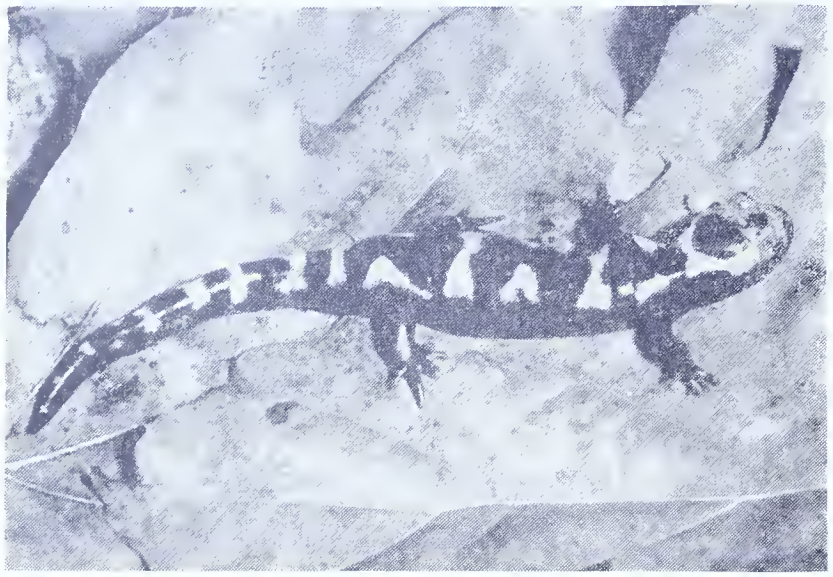
Left to right, Owen B. Ash of Scranton; the late T. H. Ash of Benton and Ivan L. Ash of Wheaton, Illinois. Three fishing pals whose days astream have been filled with experiences only they of the outdoors can learn to know and appreciate.

PENNSYLVANIA REPTILES & AMPHIBIANS

A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

No. 8 . . . Salamanders



MARBLED SALAMANDER (Ambystoma opacum) . . . Maximum length 5 inches; body thick and short, lustrous black with brownish tinges on the underside of head and on legs and toes; markings variable in size, bright white in breeding males, dull grayish in females; markings restricted to upperparts from head to tail; unlike other local ambystomas, this species mates in fall; female lays eggs on land in situations which will be flooded by fall rains; recorded from 13 Pennsylvania counties.



EASTERN TIGER SALAMANDER (Ambystoma tigrinum tigrinum) . . . Maximum length 10 inches; like spotted salamander, which it resembles, it is marked with yellow spots, but spots more numerous and irregular; belly and throat are mottled with yellow also; its nocturnal habits and addiction to burrowing makes it a rarely-seen species; egg masses deposited in ponds in spring, attached to leaves or stems of plants; rare in Pennsylvania, records only from Chester and Allegheny counties, the latter questionable.



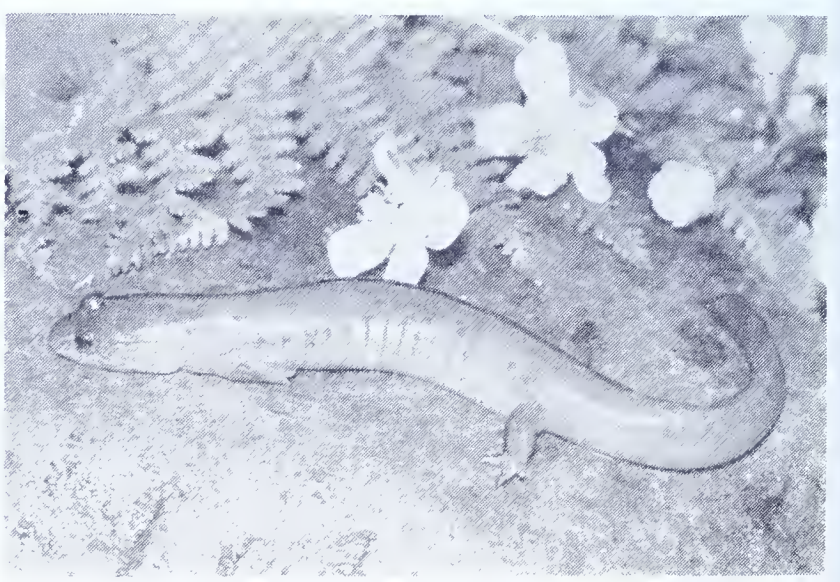
EASTERN SLIMY SALAMANDER (Plethodon glutinosus glutinosus) . . . Maximum length 7⅜ inches; secretes a fluid from its skin glands that sticks to hands like glue, harmless but difficult to wash off; strikingly marked with bright silvery white markings on a black ground; more terrestial than many lungless salamanders; found in woods and near cliffs under large rocks and logs; abundant yet little known of its breeding habits; found in 61 Pennsylvania counties; probably occurs in all.



RAVINE SALAMANDER (Plethodon richmondi) . . . Maximum length 5½ inches; similar to the dark phase of the red-backed salamander but attains a greater length; belly is brownish-black, faintly sprinkled with small white dots, never mottled in a salt and pepper pattern; preferred habitat is sides of valleys, often near limestone outcrops; aestivates during summer months; recorded only in Allegheny, Bedford, Blair, Centre, Greene, Huntingdon and Indiana counties, in Pennsylvania.



WEHRLE'S SALAMANDER (Plethodon wehrlei) . . . Maximum length 6 inches; resembles slimy salamander but its throat is generally whiter, it is usually more slender, and its white spots tend to form a row on each side of the body; very little known of its life history and habits; often found under logs and rocks and hillsides and in old quarries; general range is western New York, Pennsylvania, West Virginia and Ohio; in Pennsylvania, collected in Clarion, Greene,



NORTHEASTERN PURPLE SALAMANDER (Gyrinophilus porphyriticus porphyriticus) . . . Maximum length 7½ inches; color is pinkish or salmon clouded with brown, not purple; identified by cream colored line extending from eye to nostril on each side of head; longest and most stout bodied of the local lungless salamanders; found in cold mountain springs and streams and in farm spring houses; lays large eggs separately under stones in running water in summer; collected

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W. W. Britton, Chief Fish Warden, 235-A South Office Bldg., State Capitol, Harrisburg, Pa.

Name	Address	Telephone
Ahrens, Julius	Star Route #2, Oil City, Venango Co. ..	55504
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Bachman, Floyd	49 Broad St., Stroudsburg, Monroe Co. .	449
Bailey, Ross C.	230 W. Main St., Youngsville, Warren Co.	2-2181
Banning, James H.	Connellsville, Fayette Co.	946
Barnhart, B. F.	R. D. No. 1, Elizabethville, Dauphin Co.	34R23
Baughman, Claude B.	603 Main St., Roaring Springs, Blair Co.	52-M-1
Bidelspacher, C. A.	302 E. 3rd St., Williamsport 18, Lycoming Co.	2-4561
Blum, Norman L.	Tionesta, Forest Co.	101
Brooks, Budd R.	405 E. Chestnut St., Washington, Washington Co.	4978
Carnell, Bryce	Warfordsburg, Fulton Co.	4-R-15
Chrisman, R. J.	Kushequa, McKean Co. ... Mt. Jewett	4648
Cloos, Leland E.	Middlebury Center, Tioga Co.	4-R-31
Close, L. E.	RD#2, Emporium, Cameron Co.	6931
Cole, Harry Z.	877 Cherry St., Norristown, Montgomery Co.	2335
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Cross, George	Hammersley Fork, Clinton Co., Renovo	915-R-14
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Lech, Anthony J.	420 Hess St., Schuylkill Haven, Schuylkill Co.	566
Litwhiler, Charles	Numidia, Columbia Co.	2734
Long, Charles V.	East Waterford, Juniata Co.	15
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Neff, Harvey D.	220 N. 8th St., Allentown, Lehigh Co. ..	7063
Noll, G. Max	2 Church St., Montrose, Susquehanna County	149-M
Noll, Leroy	Pleasant Mount, Wayne Co.	Hatchery
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Ogden, Lester C.	502 Park St., Clearfield, Clearfield Co.	5-9392
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Pyle, Horace A.	RD#2, Coatesville, Chester Co.	2738-J-2
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Schadt, John A., Jr.	Lake Ariel, Wayne Co.	2051
Shearer, Clarence	Freeport, Box 285, Armstrong Co.	282
Sheldon, Carlyle	Conneautville, Crawford Co.	125-B
Norman W. Sickles,	c/o R. K. Walley, R. D. 2, Sinking Springs, Reading	4-9269
Singer, Ralph O.	Tafton, Pike Co. .....Hawley	226-R-4
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Womelsdorf, R. J.	241 Pierce St., Kingston, Luzerne Co.. Wilkes-Barre	2321

Interpretation of the Bait-Fish Law

Considerable confusion and apprehension exists among fishermen as to what species of fish are legally termed "bait-fish." An attempt has been made below to answer some of the questions most frequently asked by anglers.

1. *What is a Minnow?*

Technically speaking the minnows are a group of fishes belonging to the family *Cyprinidae.* Included in this family are fishes commonly known as daces, shiners, and chubs. Our largest native minnow is the fall fish. The carp and goldfish belong to this family but were introduced from other countries.

Most of our minnows are small, never attaining a length of more than 4 or 5 inches. Notable exceptions are the fall fish which reaches 18 inches and the northern creek chub and golden shiner which reach 12 inches. Many of the smaller minnows have dark lateral stripes and sometimes a black spot at the base of the tail.

2. *Are all small fish Minnows?*

No! A young sucker is not a minnow any more than are young trout or bass.

3. *Why is the term "chubs" used in Section 10 (Game Fish defined)?*

The inclusion of "chubs" under game fish is unfortunate and misleading as it is not known to which fish species the term originally referred. Many fishes are locally called "chubs." It is hoped that this term will be deleted from Section 10.

4. *May the young of suckers and fallfish be used as bait-fish?*

Yes. However, since they are classified as game fish they may be taken only by rod, hook and line and not more than 15 of any one of these species may be in possession at any one time.

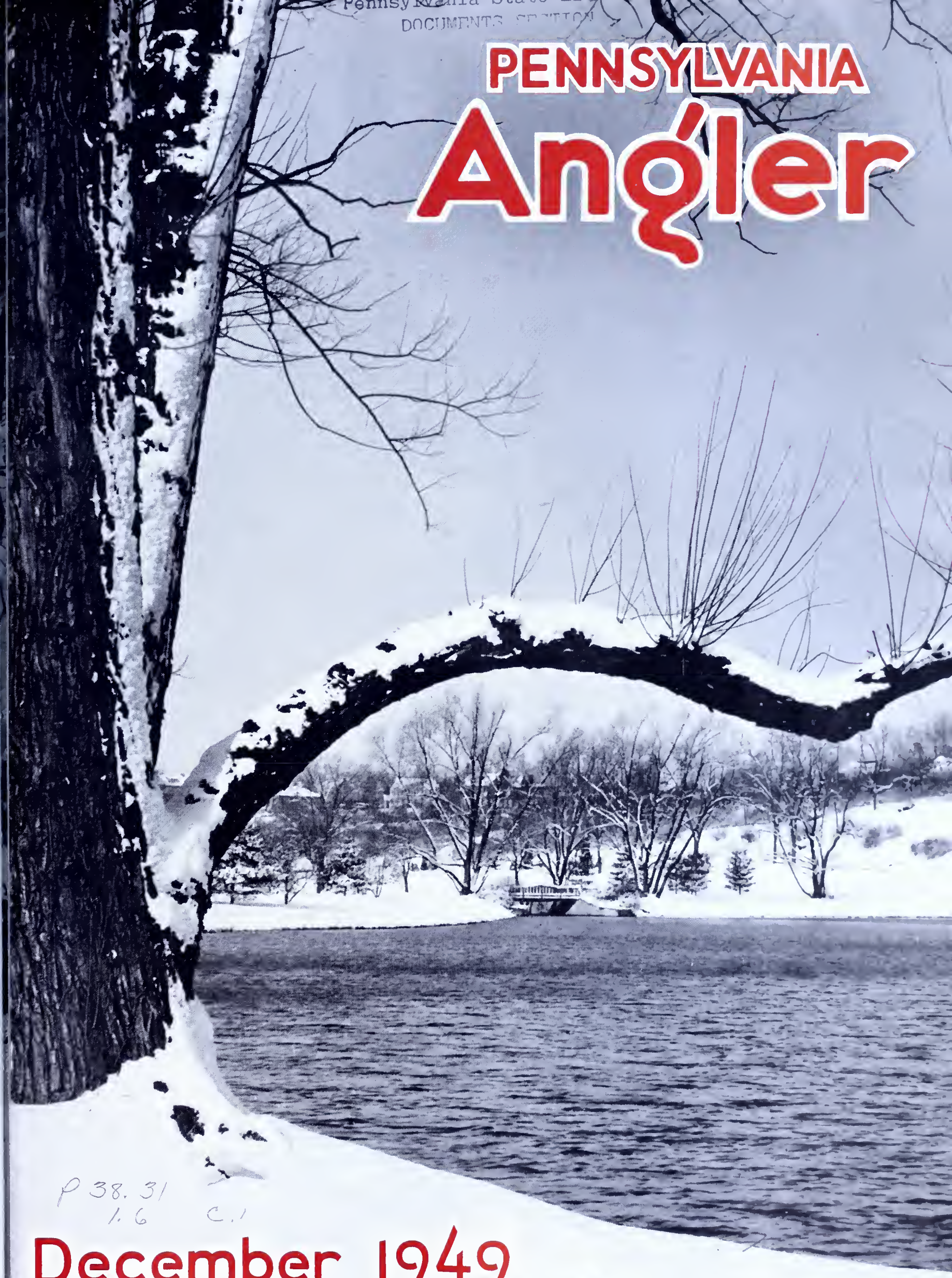
5. *What species are classified as bait-fish and can therefore be taken with a 4′ x 4′ seine?*

In general, the minnows (except fallfish); also, killifishes and stone catfish. Common names of fishes mean very little since one fish may have several common names and since these names vary from one locality to another. Listed below are common names of some of the minnows used as baitfish by anglers:

Northern Creek chub (horned dace)
Blacknose dace
Longnose dace
Hornyhead chub
Pearl dace
Redside dace
Redbelly dace
Golden shiner
Fathead minnow
Bluntnose minnow
Common shiner
Emerald shiner

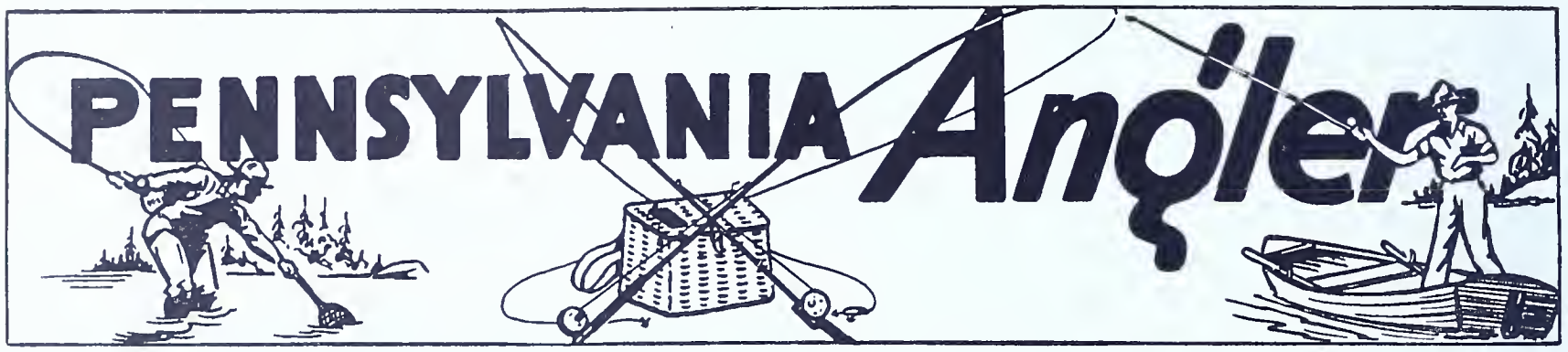
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PENNSYLVANIA ANGLER welcomes contributions and photos of catches from its readers. Proper credit will be given to contributors. Send manuscripts and photos direct to the Editor PENNSYLVANIA ANGLER, South Office Building, Harrisburg, Pa.

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HARRISBURG, PA.



The Angler

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The Cover . . .

Christmas-Time on Lake Muhlenberg opposite Allentown.

Photo by—William R. Zwikl
Call-Chronicle, Allentown

Everyone MUST Realize!

- That Clean Streams are a heritage of the people.
- That no one has the inherent right to despoil the streams.
- That streams are the source of drinking water supplies for 90 per cent of our population and are therefore a leading factor in public health.
- That Clean Streams provide wholesome and healthful recreation and therefore give the opportunity of greatest enjoyment of the great outdoors.
- That Clean Streams are necessary if fishing is to be preserved.
- That the cost of assuring clean streams is rightfully placed in the same class with charges made for any other public service—electricity, gas, telephone, etc.
- That no community or industry has the right to deprive the people of clean streams by using them as a "dumping ground" for sewage, wastes and refuse.
- That to prevent pollution of the streams is a moral obligation and absolutely necessary for the public welfare.

Conservation Pledge

I GIVE MY
PLEDGE AS AN AMERICAN
TO SAVE AND FAITHFULLY TO
DEFEND FROM WASTE THE
NATURAL RESOURCES OF
MY COUNTRY – ITS SOIL
AND MINERALS, ITS
FORESTS, WATERS,
AND WILDLIFE

Use Your Imagination — and Have Fun

By N. R. CASILLO

"That's kid stuff," scoffed Bill when it was suggested that he use his imagination.

"Maybe so," I came back, "but you'll agree that a bit of mystery enhances any experience."

The foregoing conversation and a lot more on the same subject ensued when Bill claimed that he no longer got the kick out of fishing that he used to.

It's undoubtedly true that a fisherman may sooner or later tire of the mere catching of fish, but one who keeps his imagination lively never tires of fishing.

Why does one angling experience nearly always lead on to another? It's because of the mystery with which we cloak any untried experience. If we tried to gratify our senses alone and completely neglected the mental stimulation which accompanies most of our activities, we'd get little or no kick out of life.

On a recent fishing excursion Bill and I and another companion fruitlessly tried to catch us a mess of fair-sized bass. We caught plenty around a pound or so, but the big lunkers completely eluded us. Finally, in desperation we abandoned the old familiar places where we formerly *never* failed to connect, for new and distant spots where we hoped to find the big fellows.

In an attractive little bay far from former haunts we connected with a vengeance. Indeed, our lures were taken as soon as they hit the water. When the three fish broke water we exchanged elated grins, gave a delighted whoop or two and went to work. After netting the three smallmouths we found that they were practically identical, tipping the scales at exactly two-and-a-half pounds apiece.

On the next cast our companion's lure was taken at once, and since all indications pointed to a good one, Bill and I cleared the decks and settled back to watch the fun. The fish, a three-pound, fourteen-ounce beauty was summarily landed and admired.

On his third cast, Art, the lucky one, scored again, this time with what he firmly believed to be a record breaker. On its first savage dash the fish snapped the leader and made its getaway. Howls of lament were long and plaintive. My back was turned when it happened so I missed seeing what both my companions declared to be the strongest bid for freedom that any smallmouth ever staged.

"That doesn't prove anything," I dryly observed.

"Why, you should have seen that run," fumed Bill. "It almost yanked the rod out of Art's hands."

Art acquiesced with sad shakes of his head, that is he managed to get in two good shakes and then he connected once again. "Pooh, a small one," he scornfully observed as he drove home the hook. "I'll never get a kick out of catching another bass after losing that last one," he dolefully added as he methodically went about the business of playing and landing the fish.

Bill and I were both busy when Art boated his specimen. After things quieted down a bit Art lifted his fish and drew our attention to it. "Look here, fellas," he enjoined with a sheepish grin as he pulled at something projecting from the fish's mouth. "My leader," he apologetically added.

I lifted a critical eyebrow. "Is that the big fish that you lost?" I queried.

"Couldn't be," Bill interrupted. "It was twice as big," he vehemently declared.

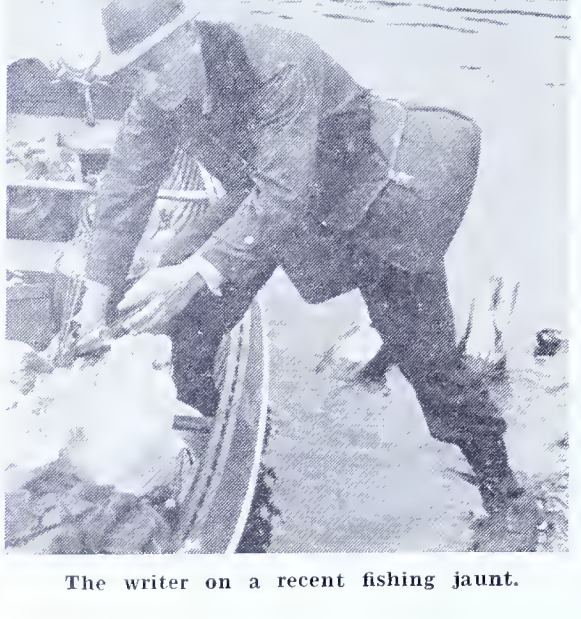
"But, there's my leader," said Art weakly.

"Manifestations of an overwrought imagination," I pointedly emphasized.

However, my observation fell on deaf ears for both of my fishing cronies were in the joyful throes of playing a couple of more specimens.

In case you're interested, Art's twice-hooked bass weighed an even three pounds.

There isn't a dyed-in-the-wool fisherman who doesn't retain some vivid recollections of a boyhood fishing adventure taking place on some local pond or stream. Most boyhood fishing memories are especially graphic because of the active imagination with which every boy is endowed. Accordingly, if you find yourself losing that useful attribute you may be relinquishing your grip on the perennial boy which most men are reluctant to lose. Well, the spirit of youth is not exactly lost, but so many strive mightily to relegate it to a long departed past.



The writer on a recent fishing jaunt.

Back in my boyhood stamping grounds is located a pond that has left me with a stirring collection of indelible memories, memories made all the more colorful because a finny denizen of that selfsame pond not only gave me the hardest battle of all my angling experience, but also left me quite breathless with excitement despite the fact that I failed to land him.

Bent's (ice) Pond, for that is its prosaic name, was alive with pun'kin seeds and hornedpout (bullheads). It was a versatile bit of water too, for on occasions it would surrender monster smallmouth bass or choice specimens of squaretail trout.

One night another twelve-year old boy and I were fishing the deep hole above the dam for some of the giant pouts that were said to live there. We anchored old Jim Ellis' waterlogged rowboat in about fifteen-feet of water; a most fearsome depth. A great elm cast its shadow over the area and made the black water appear more mysterious than ever.

The moon struggled with the surface mists as they slowly swirled along the nearby shore. The sounds made by infrequent cars rumbling over the loose planks of the bridge across the outlet were more than welcome, their homely familiarity helping to dispell the vague fears conjured up by a lively imagination. Once, the nearby hoot of a great horned owl and the scream of its rabbit victim congealed my blood.

My companion, diminutive Jackie Wright, stirred uneasily in his end of the boat. "Say," he finally ventured, "do you know that the reason we can't see the bottom is because the bottom is black?" The incongruity of his observation fazed me not at all. Indeed, it seemed at the moment to be the most natural thing in the world to say.

For nearly a minute I said nothing while an awesome fear for those baleful depths below us clutched me in its chill grip. I pictured scaly monsters

staring up at us through the Stygian blackness, monsters which we could not see because they too were black.

Suddenly, I recalled a horrible incident. "Say," I hazarded in a hushed voice, "isn't this the place where Lanny Seever drowned herself?"

I heard a click which I now know came from Jackie's throat. "Y-you mean that crazy woman who committed suicide because her husband ran off with another woman?" quavered my companion.

Just then a terrific pull on my forgotten outfit nearly unnerved me and I suppressed a yell. Also, I managed to hang on to the rod.

After a couple more savage tugs whatever had hooked itself made up the pond and without so much as missing a single stroke, stripped and carried off every foot of line that I had on my brass reel. Later I discovered a badly skinned thumb.

Never again in my rather extensive angling experience have I ever encountered a more powerful finny antagonist. Sometimes I find myself wondering if it was a fish. Some have suggested a giant snapping turtle. Anyway, whatever it was, it gave me my top angling thrill. Admittedly, though, my imagination played no little part considering the culmination of circumstances.

For some years Bill and I fished a small pond here in Lawrence county because besides being handy to town it also contained a fair number of small but succulent yellow perch.

Our usual procedure was to make ourselves comfortable at a time-honored spot, light a fire if the evening was chilly and while away a couple of hours catching a few of those diminutive perch. If the fish were indisposed we still had an enjoyable time.



Art strikes pay dirt with flyrod and small feathered lures.

One evening we broke our usual rule by making it a threesome, the third party, it may be mentioned. now is a member in good standing of an inseparable angling trio.

Things that evening were going along at their usual comfortable tempo when Burr, our guest, got out his bait casting outfit and an array of plugs. Bill and I exchanged amused glances.

"All you'll do is stir up the bottom," said Bill with a good-natured chuckle as he saw Burr affix a popular plug to his line.

Burr made some unnecessary tackle adjustments before saying anything. "It may sound crazy to you," he finally remarked, "but that cove over there looks like a natural for bass. But, I suppose you chaps have already tried it," he ruefully added.

"I can't say that we have," I volunteered. And, I suddenly found myself wondering why we hadn't.

"Well, it wont hurt to try," said Burr as he began skirting the shore for his objective on the other side of the pond.

While Burr was on his way my imagination ran riot. Now that it had been mentioned the cove did look good. What if he did connect. In fact, he might even tangle with a real lunker.

Well, Burr did connect and with a real lunker, too, Also, as Bill had predicted, the bottom was stirred up, but only because the water was too shallow to permit a real he-bass to do his stuff.

Anyway, when Burr's plug hit the water the spot that it contacted seemed to swell and then violently burst. From the exact center of the exploding boil emerged a bass, its momentum shooting its amazing bulk clear of the water. Bill and I looked on in stupefied silence as Burr went stark mad.

By the time Bill and I marshalled our forces and swung into action Burr had landed the fish and was fast to another.

Yes, that little pond proved a short-lived bonanza. To this day we don't know how the fish got in there, but whoever was responsible certainly stretched his imagination to the breaking point to even entertain the thought that the fish would eventually attain

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Art Alexander and Bill Klee on a northern tier county beaver pond.

IMPORTANT TO ALL

PENNSYLVANIA FISHERMEN

The special amendment of the Pennsylvania Fish Laws enacted by the 1949 Legislature distinctly prohibits fishing of all kinds in any waters of the state from March 14th to April 15th except in rivers, lakes and ponds not stocked with trout.

The Legislature has minced no words in its determination to put a stop to the taking of trout under the guise or pretense of fishing for suckers. This will be of extreme interest to all fishermen in that the trout stocking program during that period will be made secure until the opening of the season on April 15th when everybody will have an equal opportunity.

The field force of State Fish Wardens are alerted and have especial instructions from the Fish Commission to see to it that the new law is carried into full force and effect.

Daily Creel and Possession Limit

The daily creel as published in the Fishing Regulations or Summary establishes the number of each specie of fish which may be legally caught in any single day.

The possession limit at any time is fixed at one day's creel limit, that would mean ten trout which is the daily creel limit would by the same token be the possession limit and would include the trout one may have caught earlier and have in refrigeration etc. If a fisherman caught four trout and placed them in his refrigerator and then the next day caught ten more, he will be in violation of the law by having four more trout than the legal possession limit allows him at any one time. If the fish were black bass the number would be six and so on.

The possession limit however does not prevent the fishermen from having ten trout, six bass etc. but does fix the limit at twenty-five (25) of the combined species at any one time. A pamphlet of the fish laws reflecting these regulations will accompany each license issued in 1950.

Smelt Season Changed

Because of the early run of smelts last Spring, the Commission has changed the opening day to March 15th instead of April 1st. The 1950 season will therefore begin on March 15, 1950 and extend to May 31st and affects all streams emptying into Lake Erie, within the confines of Pennsylvania, from the mouth of the stream in a southerly direction to State Highway Route No. 5, which is a distance of approximately one-half mile.

George Shoemaker Appointed

On November 16th Governor James H. Duff announced the appointment of the Hon. George C. Shoemaker of Ashland, a member of the Atlantic States Marine Fisheries Commission.

Pennsylvania fishermen will recall Mr. Shoemaker as the Member of the House of Representatives from Schuylkill County who sponsored the Legislative investigation and study of feasible fishways on the lower Susquehanna River. His appointment to the Atlantic States Marine Fisheries Commission is hailed by inland water fishermen all over Pennsylvania.

FISHING REGULATIONS FOR 1950

SPECIAL NOTICE: By special amendment of the Fish Laws passed by the 1949 Legislature—All fishing is prohibited in any waters from March 14 to April 15, 1950 except in rivers, lakes or ponds not stocked with trout.

SUMMARY NO. 1—Inland Waters Only

Species	*Season*	*Size*	*Creel Limit*
Brook, Brown & Rainbow Trout	April 15 to July 31. Season opens 5 A.M. April 15	Not less than 6 inches	10 (combined species)
Trout (lake or salmon)	July 1 to Sept. 29	No size	8
Bass, Small & Large Mouth Bass	July 1 to Nov. 30	Not less than 9 inches	6 (combined species)
Pike Perch (Walleyes)	July 1 to Nov. 30	Not less than 12 inches	6
Pickerel	July 1 to Nov. 30	Not less than 12 inches	6
Muskellunge	July 1 to Nov. 30	Not less than 24 inches	2
Northern Pike	July 1 to Nov. 30	Not less than 16 inches	4
Bass (white, crappie, strawberry, or calico	Any time of year	No size	15 (combined species)
Rock Bass, otherwise known as red-eye, goggle-eye	Any time of year	No size	15
Yellow Perch	Any time of year	No size	15
Sunfish, Bluegills	Any time of year	No size	15 (combined species)
Catfish	Any time of year	No size	15
Suckers	Any time of year	No size	15
Chubs	Any time of year	No size	15
Fallfish	Any time of year	No size	15
Carp	Any time of year	No size	15
Eels	Any time of year	No size	Unlimited
Frogs	July 2 to Oct. 31 (Sunday excepted)	No size	15—Not more than 50 in any one season
Tadpoles	July 2 to Oct. 31 (Sunday excepted)	No size	15
Terrapin (Red Leg)	Nov. 2 to Mar. 14 (Sunday excepted)	No size	5—Not more than 50 in any one season. All other Turtles unprotected.
Bait-fish or fish-bait	Any time of year	No size	Bait-fish—35 Fish-bait—35 Combined—50

Note: In above mentioned seasons, both dates are inclusive.

SUMMARY NO. 2—Delaware River, Above and Below Trenton Falls

Species	*Season*	*Size*	*Creel Limit*
Trout (all species)	April 15 to July 31	Not less than 6 inches	20 (combined species)
Bass (large & small mouth)	June 15 to Dec. 1	Not less than 9 inches	10 (combined species)
Bass (strawberry, calico, rock or red-eye or goggle-eye, white, crappie	June 15 to Dec. 1	Not less than 6 inches	Rock Bass—20 Calico and crappie (combined species)—20
Pike Perch	June 15 to Dec. 1	Not less than 12 inches	10—(Walleyes)
Pike	June 15 to Dec. 1	Not less than 12 inches	10
Pickerel	June 15 to Dec. 1	Not less than 12 inches	10

SUMMARY NO. 3—Delaware River between Pennsylvania and New York

Species	*Season*	*Size*	*Creel Limit*
Bass (large and small mouth)	July 1 to Nov. 30	Not less than 10 inches	6 (combined species)
Rock Bass	July 1 to Nov. 30	Not less than 6 inches	Unlimited
Trout (all species)	April 15 to Aug. 31	Not less than 7 inches	10 (combined species
Pike Perch	May 10 to Mar. 1, next ensuing	Not less than 12 inches	15
Pickerel	May 1 in any year to Mar. 1 of ensuing year	Not less than 12 inches	15

SUMMARY NO. 4—Lake Erie

Species	*Season*	*Size*	*Creel Limit*
Bass (large & small mouth)	June 15 to Nov. 30	9 inches	6 (combined species)
Rock Bass	Any time of year	No size	15
Bass (crappie, strawberry, or calico)	Any time of year	No size	25 (combined species)
Northern Pike (any species)	June 15 to Nov. 30	12 inches	8 (combined species)
Muskellunge	June 15 to Nov. 30	Not less than 24 inches	2
Sunfish-Bluegills (Bream)	Any time of year	No size	15 (combined species)
Smelt	March 15 to May 31	No size	Unlimited

(All streams emptying into Lake Erie within confines of Penna. from mouth in a southerly direction to State Hwy. Rt. No. 5).

SUMMARY NO. 5—Pymatuning Lake

Location: Between States of Pennsylvania and Ohio—Crawford and Mercer Counties

Species	*Season*	*Size*	*Creel Limit*
Muskellunge	July 1 to Nov. 30	Not less than 30 inches	2
Pickerel (Yellow Pike)	July 1 to Nov. 30	Not less than 13 inches	6
Black Bass	July 1 to Nov. 30	Not less than 10 inches	6
Pike Perch	July 1 to Nov. 30	Not less than 13 inches	6
Sauger	No season	Not less than 11 inches	6
Bluegill or Sunfish	No season	No size	15 (combined species)
Rock Bass	No season	No size	15
Yellow Perch	No season	No size	15
White Bass	No season	No size	15
Crappie	No season	No size	15
Catfish	No season	No size	15
Suckers	No season	No size	15
Carp	No season	No size	15
Minnows (2 rods and lines or 2 lines only)	No season	No size	35
Frogs (unlawful to take frogs by use of light)	July 2 to Oct. 31 (Sunday excepted)	No size	25 in one day 50 in one season
Tadpoles	July 2 to Oct. 31 (Sunday excepted)	No size	25 in one day or in possession at one time

Pennsylvania Federation of Sportsmen's Clubs Panel Meeting

HELD IN HARRISBURG—OCTOBER 14-15, 1949

Resolutions Relating to Fishing

PURE STREAMS

1. *Resolved:* That the Department of Mines or any agency in charge of mine sealing and the elimination of pollution expedite that work as quickly as possible, and that a report be given on progress made for publication in the *Federation News.*
Approved.
2. *Resolved:* That the Pennsylvania Federation of Sportsmen's Clubs put in motion appropriate legislation to amend the present Pennsylvania Pure Stream Law to name all Pennsylvania fish wardens as prosecuting agents under the Pure Streams Law in cases of pollution in any waters of the Commonwealth.
Approved.
3. *Whereas:* We, being alarmed by the swift advance of coal mine acid pollution in Pennsylvania, *Be It Resolved:* That the Honorable James H. Duff, Governor of Pennsylvania be requested to make a public report on action taken and results accomplished with this problem.
Approved.

GENERAL

4. *Be It Resolved:* That a more suitable place be selected for the annual meetings in Harrisburg which is more convenient to the attendance, to eliminate the Educational Forum as too large, too dark, bad acoustics and poor audibility between those on platform and delegates in the convention.
Mr. HENDERSON and Dr. MORTIMER to make a study and report back to the February meeting.
5. *Whereas:* The snapping turtle is one of the greatest enemies of wild ducks on our lakes and streams, coming up from under water and pulling them down, and *Whereas:* He is also destructive to fish, *Therefore Be It Resolved:* That the Fish and Game Commissions instruct and encourage all sportsmen's clubs in the best method to control him.
Approved.
6. *Approved a Recommendation to the* Administrative Committee that the sovereignty be placed in this body at either the October or February meetings; and that the *Annual Meeting* be in October instead of February; and the eleciton of officers take place at the October meeting.
7. *Resolved:* That every possible effort be made to have the Representatives and Senators from Pennsylvania work for a sufficient appropriation to expand the Lamar Federal Fish Hatchery to its fullest capacity.
Approved.
8. *Whereas:* Members of the Pennsylvania State Legislature are on many occasions influenced by and obliged to support the views of their constituents who elect them to office; and *Whereas:* Such views may be in conflict with the approved legislation of the Federation which the Board of Directors of the Federation are obliged to support, now *Therefore Be It Resolved:* That Section 10 of Article 5 of the Constitution and By-Laws of the Federation be amended to place members of the State Legislature on the same status as members of the Fish and Game Commissions, namely, to prohibit them from being an officer or director of the Federation.
Tabled.
9. *Resolved:* That the Pennsylvania Federation of Sportsmen's Clubs urge the Pennsylvania Department of Public Instruction and the Pennsylvania State College to henceforth include on budgets of Commonwealth appropriations to the College the cost of conducting the Pennsylvania Conservation Education Laboratory for teachers, instead of continuing to depend upon donations to carry on these splendid courses.
Approved.
10. *Resolved:* That the Pennsylvania Federation of Sportsmen's Clubs find out what kind of camp was conducted at Indiantown Gap during the past summer—*i.e.,* whether or not conservation was taught there—and put in motion an effort to have this camp conducted as a conservation camp.
Approved and Referred to the Conservation Committee.
11. *Whereas:* In order that the State Legislature of the Commonwealth of Pennsylvania, Game Commission, Fish Commission, newspapers, national and local Sportsmen's Magazines, radio commentators, and other news dispensing agencies, shall in the future have an accurate unbiased cross-section poll of the sportsmen's desires on any resolution passed by the Pennsylvania Federation of Sportsmen's Clubs requiring State Legislation, now *Therefore Be It Resolved:* That the By-Laws of the Pennsylvania Federation of Sportsmen's Clubs be so changed or amended to state: That each Legislative Resolution must be adopted by at least a two-thirds majority vote of the delegates present and voting as the representatives of the County Sportsmen's Organizations before any Pennsylvania Federation Legislative Resolution is sent to the State Legislature for action.
Rejected.
12. *Resolved:* That the Northwest Division be fully supported by the State Federation in its fight to oppose construction of the proposed Sharpsville Reservoir, and that the Northwest Division follow through in its Federation with this resolution for statewide support.
Approved.



"I CAN STAND ON MY OWN FEET DEAR!"

FISH

13. *Whereas:* The female pickerel, heavy with eggs are the ones caught in ice fishing during the winter months, *Therefore, Be It Resolved:* That ice fishing for pickerel be prohibited for three years.
Approved.
14. *Resolved:* That the pickerel has become a predator and an undesirable inhabitant of the watershed of the First Fork of the Sinnemahoning Creek and that the Fish Commission take measures to remove pickerel from that area or whatever measures are necessary to bring that about.
Approved.
15. *Resolved:* That all waters stocked by the Pennsylvania Fish Commission with trout during the open trout season shall be closed, by proper advertising and posting, to all fishing until 6 P.M. (legal time) on the third day after such waters are stocked with trout.
Rejected.
16. *Resolved:* That the Pennsylvania Federation of Sportsmen's Clubs reaffirm its previous resolutions (adopted October 18, 1947) for legislation to permit the use of plugs or artificial bait with three burrs single hooks attached on the Delaware River above and below the Trenton Falls, making it possible to use the same artificial baits for inland and boundary waters.
Approved.
17. We the Lackawanna County Federation of Sportsmen's Clubs resolve that the chub be taken off the Game Fish Class and put in the Bait Fish Class, to avoid confusion under the present law.
Approved.
18. *Therefore Be It Resolved:* That the mid-summer stocking of all trout streams approved by the Fish Commission be closed from three (3) to five (5) days after being stocked.
Rejected.
19. *Be It Resolved:* That the State Federation urges the Fish Commission to abandon an averred policy by which the Commission does not stock the portion of any streams of which sections are privately stocked and with fishing privileges limited, and in its stead, the adoption of a policy that will permit the stocking of any portion of any stream where the pressure created by public fishing requires it.
Approved.

Black and White Crappies

By BILL WOLF

(Editorial note: Trout, bass, walleyed pike and similar major game fish hold the spotlight in Pennsylvania's angling interest, but there are many lesser kinds which provide good angling, or are of especial importance as bait or food for the larger fish. This is one of a series of articles dealing with these minor fishes of the State.)

Here are two closely-related fishes which look much alike at first glance, and certainly have one thing very much in common. That is a fascinating variety of names beside their usual ones of black crappie and white crappie. Some of the many aliases are applied indiscriminately to either fish, lending to the confusion that exists over which is which.

For example, both are known as strawberry bass in Pennsylvania, although I have heard that name most frequently applied to the white crappie in the lower Susquehanna where it reaches a respectable size. The black crappie's most common other name—and one that fits it best—is calico bass. The pronounced markings give it somewhat the appearance of printed cloth. As for "strawberry bass," I have no idea where that name originated unless they bite especially well about the time strawberries are ripening.

The white crappie also is known as sac-à-lait, strawberry perch, papermouth, white bass, suckley perch, tinmouth, chinquapin perch, bachelor, newlight, Campbellite, lamplighter, and crapêt (from which latter French name and its Anglicized pronunciation comes our English name of "crappie.")

The black crappie, in addition to calico bass and strawberry bass, sometimes is known as the grass bass, barfish, papermouth and tinmouth.

It is easy enough to understand how they came to be called papermouth and tinmouth because of the thin skin about the bones of their mouths, but why the white crappie would be called newlight and lamplighter is beyond me, and I have never come across any explanation. Even the pronunciation of "crappie" differs. In May, 1949, I caught black crappies from a lake in Minnesota, where they are an important sport fish, but everyone in that section calls them "croppies."

Although not especially plentiful in Pennsylvania, the crappies are found frequently enough to make them an interesting small game fish, and sometimes they turn up in the most surprising places. One evening I was fishing for trout in Buckhill Creek near Canadensis and came to a fairly large pool just as the light was failing and visibility was poor. However, I could see rises—many of them—on the tarnished silver that was the pool's surface, and felt that I was in luck, having arrived just as the trout started feeding. On the first cast with a small dry fly, I got a strike and landed the fish.

Much to my surprise, it was a medium-sized black crappie—or calico, as I usually call them. I cast again, got another strike and landed a second crappie. I caught eight in rapid succession and then the feeding activity died down.

They shouldn't have been there. I'd say offhand that a trout stream like Buckhill Creek would be the least likely place in the State to find crappies; but there was no mistaking them for any other fish. Perhaps it was their spawning season and they had worked up from larger water; but that is a weak explanation at best. I have never since caught one in a small mountain stream, although there may be places in the State where this is possible.

The great natural home of the crappies is in the lakes and streams of the Mississippi River drainage, where they are both abundant and grow to large size. On the Minnesota trip mentioned some paragraphs back, I caught just about as many crappies as I wanted. They were in shallow water, and it was a rare cast when I didn't get a strike at the small dark streamer fly I was using. We do not have any such fishing for crappies in Pennsylvania—or, at least, I have never found it; but the anglers who like to still-fish, usually with a minnow as bait, catch their share of "strawberry bass" and "grass bass' in the quiet stretches of our rivers and streams, and sometime in ponds.

The easiest way to learn to tell them apart would be to see a white crappie and a black crappie side by side. Then their pronounced differences would be apparent immediately. The black crappie really is darker than the white crappie as a rule, it is a chunkier-looking fish, and it has dark spots over most of its body while the white crappie's markings are inclined to gather in faint vertical bars and seldom cover the bright silvery belly.

There are two more positive aids to identification, however. Let's assume you have caught a fish which you know must be a crappie, but you are not certain which kind. In that case remember these things:

The black crappie has a smaller mouth than the white, and a vertical line drawn down past the forward edge of its eye would barely touch the back part of its mouth. The black crappie also has more dorsal spines than the white, with 7 or 8 in the top fin.

The white crappie's mouth would be cut into by a vertical line at the forward edge of its eye. The white crappie has 5 to 7 dorsal spines—usually 6.

Observation of the mouth and dorsal spines should make it fairly easy to identify either immediately. The black crappie reaches two pounds in weight and four-pound fish are on record, but the latter are extraordinary and the average black crappie seldom weighs more than a pound. The white crappie runs slightly smaller, one to two pounds in large specimens with a top weight of three pounds. It will average under a pound in this State.

Although I enjoy fishing for them, I cannot say that they are especially exciting as a sport fish, although an occasional crappie will forget itself and fight like mad on light tackle. They are members of the larg sunfish family, but they don't have the same spunk as other members and seldom put up the boring down battle waged by even the punkinseed.

However, this is much like running down a good friend, and I certainly wouldn't want to discredit the crappie as a fine panfish. It is just that—a fine panfish. Although it doesn't fight as well as the common sunfish, it frequently grows to larger size and when the exceptional crappie starts throwing his weight around, you will know that you are in a battle. Furthermore, if they come from clear water, crappies are among the best of food fish. A muddy bottom with rotting vegetation sometimes gives them a bad flavor.

They will take almost any kind of bait, but the general practice in this State is to fish for them with small minnows. Minnows are a major part of their diet, which accounts for their effectiveness on the hook. Unfortunately, the person who uses minnows as bait seldom fishes in shallow water where crappies invariably spend much time from spring until late summer. It is difficult to fish a minnow in only a foot or so of water, so the bait user is forced to try deeper holes and consequently misses a lot of nice fishing

In late summer they do move into

deeper water and the bait angler does fairly well, but it has been my own experience that a small streamer will catch far more crappies than bait at any time. I prefer a McGinty tied as a streamer on a 3x shank No. 10 hook with red tail, black and yellow chenille body, brown hackle and a black hair wings. This looks like a small dark minnow or beetle when in the water. When it is cast into shallow water and retrieved with rather slow twitches of the rod, the crappies take it avidly. In deeper water, it is allowed to sink and then is moved with the same fits and starts. A well-dressed line that floats enables the angler to see the strike before he feel it as the line tightens and moves in the direction opposite that in which he is moving it when the crappie hits. The floating line acts like a float or bobber.

Any small streaemer or large wet fly will work at times, and the angler must experiment. I use an eight-foot, four-ounce fly rod and a light tapered leader. On this outfit the crappie can stage the best battle of which he is capable, and the exceptional one with more-than-average courage in its makeup can put up quite a fight.

Crappies are excellent fish for stocking ponds, but care must be taken that they do not become overabundant and bunty. Unlike other members of the sunfish family, crappies continue feeding right on into winter and, when present in a lake or pond, will hit bait offered by those human snowbirds who fish through the ice.

These are handsome fish, and a string of about five crappies weighing a pound each makes a nice string for any angler to bring home. In fact, that's a lot of crappie.

6 Inch Snake in Belly of Bluegill

To catch a string of crappie bass and one blue gill on an evening is common news; but when the single bluegill discloses a 6-inch snake that news item then becomes exceptional news. According to correspondence from William D. S. Kurts, Sr. of R. D. No. 2, Kutztown, Pa., while fishing in Maiden Creek near Moselem Station on the evening of October 10th, Bill caught eleven fine crappie bass and one bluegill. Upon cleaning the blue gill he found in its stomach 6¼ inch long water snake.



Top is a black crappie (Pomoxis nigro-maculatus, formerly known as Pomoxis sparoides) and the bottom fish is the white crappie (Pomoxis annularis). Note differences in mottled markings, the chunkier body of the black crappie, its mouth which is smaller than that of the white crappie, and the greater number of dorsal spines in the top fin of the black crappie.

Susquehanna Showing Results

Cleanup of the Susquehanna River watershed of pollution from anthracite collieries is fast reaching the final stages under the Clean Streams program according to reports of the Bureau of Engineering, which is excecuting the anti-pollution program and which shows the outstanding progress being made in preventing silt and fine sizes of coal from entering those waterways. These strides are being made on the heels of the world-renowned accomplishment of preventing silt from all the 47 collieries in the Schuylkill River basin from entering these streams. As a result of the job done along the Schuylkill an estimated two million tons of silt and fine sizes of coal are prevented annually from entering the waterways through the installation at all the coal breakers of desilting systems. Clear water is now flowing in that river for the first time in more than 50 years when washing of coal became the established method of preparing the fuel for market.

In addition to the 47 collieries in the Schuylkill basin there are 145 operating collieries in the anthracite fields—nine of them on the Lehigh River watershed and 136 in the Susquehanna basin. Permits for desilting systems have been issued by the Bureau of Engineering to 114 of the 136 Susquehanna Basin operations and most of those under permit are actually in operation. The others are under construction. Plans have been received from the remaining 22 operations and are being processed by the Bureau.

Three of the nine operations in the Lehigh basin have desilting systems in operation; three are not required to have permits since they do not discharge any wastes to the waterways, and plans for desilting systems have been submitted by the remaining three operators, which are being processed.

Persistent Polluter Brings Action

Action to bring compliance with its order issued under the Clean Streams program has been entered by the Sanitary Water Board against the City Laundry of Stoney Creek Mills, Lower Alsace Township, Berks Co. in the Court of Common Pleas of Berks Co. Named in the suit are S. A. Mednick, operator of the laundry and the Berks Co. Trust Co., trustee of the estate of J. Hervey Sternbergh. Representing the Board are Robert J. Trace, Deputy Attorney General, and Frederick J. Bertolet, special Deputy Attorney General of Reading.

The laundry is charged with failure to comply with the order of the Board to install a waste treatment system to abate pollution of Antietam Creek to which its wastes are discharged. In the court action the Board seeks order which would require the abatement of the pollution or the cessation of operation of the laundry.

You can spend as much or as little on fishing as you can afford. That won't be the measure of good that you can get out of the angling sport. A lazy day with a young boy and a can of worms on a babbling brook may give as lasting memories as a cruise out where the blue begins after the mighty game fish of the briny deep.

Holmesburg Fish and Game News

Angling From the Treetops

By C. E. BROOKS

In the *West Coast Sportsman*

ANY DOPE knows that any dope can catch fish if he's in the right place at the right time, with the right bait. The purpose of this epistle is to point out, in plain everyday words, how these three items may be syncronized by the average angler, whoever he may be.

The right place is any stream, lake, pond or other body of water than contains fish. The right place on the right place is the spot where the fish are feeding. If you find this spot, you are automatically there at the right time. And there's an easy,—well, fairly easy, —way to do it, every time.

For some reason, the average angler is reluctant to spy upon his finny would-be prey. The reason for this eludes me. The methods I use to seek out a feeding fish would put the OGPU to shame. I make no bones about it. I go fishing to catch fish, and by hokey, it's a darn sight easier to catch a fish that's feeding than one that's already eaten and is just loafing around picking his teeth. And the way to find if MR. FISH is hungry, is not to go pounding on his door, asking if he'd care to dine. For nine times out of ten, he'll say no. And as I only escape from my wife nine times yearly, I can't afford to be putting forth fruitless, or fishless invitations.

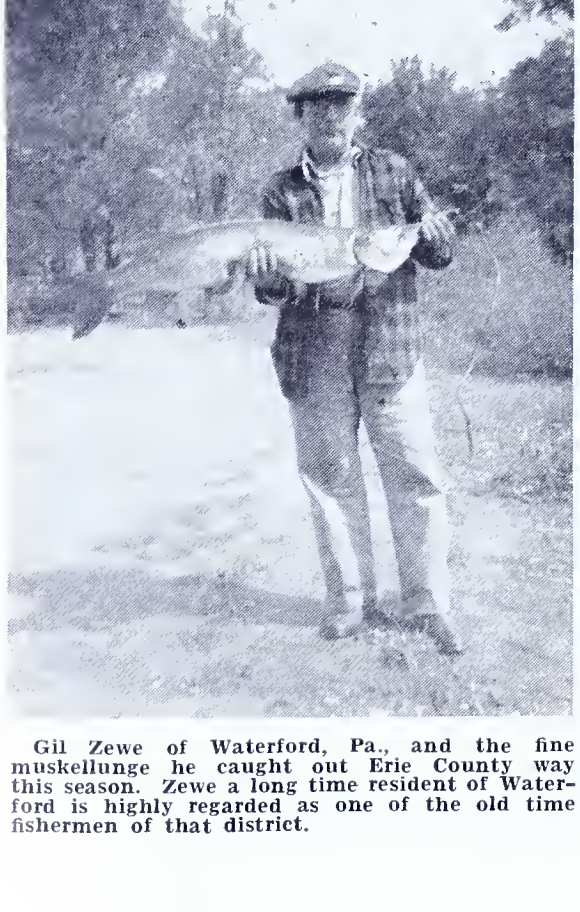
Nossir, the way to do it is to catch Mr. Fish feeding, then, catch him. Seek out your fish, by stealth and craft, and watch his every move until you've got him dead to rights. Then offer him a tidbit. And don't spend thirty minutes figuring out a nine-day diet. If a fish is feeding, just about any lure or bait that isn't too outlandish will be acceptable to his finy nibs. I've yet to see a hungry fish that was especially finicky as to what he gobbled. And I've fed them everything from cigarette butts to marbles, from mulberries to copper pennies, to prove my point.

If you fish streams mostly, hide behind rocks, peer over grassy banks, from behind trees, or even in them. A bushy limb, fifteen to thirty feet up, depending on your youth and agility, is the place of places to spy on your quarry's activities. You are hidden, but have a full view of everything that's going on, a grandstand seat with kitchen privileges, you might say. The things one can see in a clear stream from a perch on a limb are limitless. From here you can see every move your prospective victim makes. And it doesn't take long to figure out why he makes it.

A feeding fish is a cruising fish. If your boy is just lounging, or taking a sunbath, he acts like your brother-in- law, just loafs, and ignores his surroundings. Likewise, if he just moves and drifts about in a listless manner, he's just a mildly curious brother. He might be enticed into feeding, and if there are none about that are really feeding, he might be worth your effort. But, if our chief character is really feeding, there's no doubt about it. He moves around like a cat on a hot stove. He's all business. His movements may not cover much area, but how he covers that area. Nothing escapes his eye, and if edible, his mouth.

Yes, if your friend is moving back and forth, casting like a dog after birds, swinging here and there, but always darting back to the same general vicinity, he is gathering his lunch. Offer him a tasty morsel, and get ready to punch his check.

This type of activity applies mostly to streams, where most fish have a favorite holding spot. If the stream is of the type that furnishes plenty of office space in the form of overhanging rocks, logs, brush jams, the undercut banks, and various other cover, it's a different proposition. Not necessarily more difficult, just calling for a different interpretation of your quarry's moves, and a little different approach to spying on them.



Gil Zewe of Waterford, Pa., and the fine muskellunge he caught out Erie County way this season. Zewe a long time resident of Waterford is highly regarded as one of the old time fishermen of that district.

In the first place, it takes a little more tact, time and skill to worm into position to spy on these spots. Probably one reason the fish chose them. They like privacy. Also, the moves of a feeding fish in such a place are different. Here our piscatorial warrior lies in ambush, and darts out upon his unsuspecting meal. Too, such hideouts are usually located in places where a lot of food naturally finds lodging due to tricks of the current. And, since such choice locations are usually deeper and darker than the surrounding water, it is somewhat more difficult to see the fish, and to analyze his actions.

But persevere, and eventually the fish will make a move that will tell unmistakably he's on the feed. Then slip him your chosen lure. It may take a bit of maneuvering to get into his feeding range, but such fish usually take readily because they feel more secure than their more exposed brethren.

Ponds or lakes, on the whole, are a bit more difficult, due to the depth and color of most such bodies. I often use a wooden bucket with a glass bottom, for exploring the deeper spots and it is a mysterious lake indeed that won't give up its secret to the above method. I've located fish in as much as forty feet of water, and even in milky, unclear ponds, they can be spotted from fifteen to twenty-five feet down.

This type of spying is usually done from a drifting boat which has been cast adrift at a place where the wind will produce the desire direction of drift. Or a companion can slowly, very slowly, ply a careful paddle to provide locomotion to the fishy feeding ground.

If the peek in the bucket method doesn't appeal to you, go climb a tree. Or a bluff or cliff, or anything lofty enough to get you well above the water. From here you can see over a larger area, and to quite a depth, deep enough to take care of most locations, since lakes and ponds are usually shallower near shore, especially where trees are located.

Fish feeding in deep holes act much the same as fish feeding in streams where cover is scarce. They are cruis-

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I, Am Old Man River and I Do Say "Sumpin"!

"because you need me every day to stay alive. Each one of you uses from 52 gallons to 100 gallons of water per day. Domestic purposes . . . cooking, drinking, washing clothes, personal sanitation require about 75% of the water used. Industrial users . . . the plants and shipping that make the jobs you do—the clothes you wear—process the food you eat—need 20% of the water. To make your home safe . . . flushing of sewers—fire extinction—street watering and other public uses, account for about 5% of the daily per capita consumption.

"when I am potable—which is another way of saying 'fit to drink'—I am bright . . . clear . . . sparkling. Free from suspended matters. Reasonably soft. Free from chemical poisons . . . in such condition that I do not have bacteria that will cause typhoid fever . . . cholera . . . diarrhea . . . or other water borne diseases.

"polluted, I affect your health . . . well-being . . . prosperity . . . when industrial wastes and untreated sewage are allowed to enter my domain, I may affect your health. I may affect your well-being because fish cannot live in heavily silted and polluted waters and I become unfit for swimming. I may affect your prosperity because new industries will not locate where the water will corrode machinery—or where the cost of treating the water is so high it adds materially to the cost of production. Tourists will not come vacationing where they cannot enjoy water sports and recreational facilities in beautiful and healthful surroundings —and the tourist business is the fourth largest economic force in Pennsylvania.

"the quality of my water depends on you . . . as a resident of Pennsylvania you have an individual stake in good water—and therefore an individual responsibility. I can be made clean and kept clean only with public co-operation. Make certain that your local government is taking proper steps to prevent polluting me with untreated sewage. Do not condone or be indifferent to industries and businesses who allow untreated wastes to enter my domain. Do not tolerate dumping of garbage and rubbish along my banks. Protest these outrages against me, individually or through an organization. Remember—individual opinions—added together—make public opinion.

"please do not do these things that harm me —in your home . . if you have a septic tank make certain that it is properly installed and large enough to take care of sewage wastes adequately. I have already emphasized the fact that sewer systems should have sewage treatment works to prevent untreated sewage from polluting me. If you have a business or manufacturing plant—or work in such places—no matter how small or how large—do your share to prevent industrial wastes from poisoning me. Don't take short cuts in getting rid of such wastes. Very often the method to make those wastes fit to enter my waterways without causing harm is simple and inexpensive to install. As a matter of fact, 'good housekeeping' in industry will in itself relieve me of much of the filthy wastes. Remember—that every bucketful of untreated waste—coming from thousands of different sources—adds up to a mighty river—of pollution.

"will you help me as I try to help you? I am your most important natural resource. Upon me depends your life and the standard of that life. Help to keep me clean so that I can work for you to the best of my ability.

I realize that to bring about pollution abatement on a state-wide basis is a stupendous job . . . it involves a multitude of problems. There are many types of industrial wastes, each one having characteristics different from the other, making it necessary to a large extent to treat them individually to prevent them from feeding me liquids and solids which turn me into something vile. It will involve the expenditure of large sums of money by municipalities to install sewage treatment works to keep me from being an open sewer . . . but surely those expenditures are as essential to you and the public welfare as are the vast sums spent for electricity, gas, etc. As a matter of fact, it is utter folly to permit me to be filled with filth and poisons and then be required to spend great sums to make me fit for use. You realize I am the source of water supply for nine-tenths of the people of this State . . . CLEAN ME UP AND KEEP ME CLEAN and your expense and effort to procure good water will be lessened many fold. Permit me to serve you as I was originally intended to do. Under orders from the State of Pennsylvania many industries are already treating their wastes . . . many more have submitted plans for approval of projected treatment systems . . . notices to submit plans are being sent to other industries . . . many municipalities have submitted plans for sewage treatment works . . . eventually all polluters will be included in these orders. I know the program will succeed, which gives me joy. Share in that joy by cooperating fully. I am Old Man River and I say to you . . .

For *Protection* of Health
To *Preserve* Natural Resources
For *Pride* in Your State
GET BEHIND THE DRIVE FOR CLEAN STREAMS"



Fish Commission Cooperating With Pure Stream Drive

A scientific study of the effects upon fish of any toxic substances which might be contained in industrial wastes will be undertaken by the Bureau of Engineering, State Deparmtent of Health under direction of the Sanitary Water Board as a further step in promoting the Clean Streams drive. The work will be carried on at the laboratory of the State Fish Commission at the fish hatchery at Pleasant Gap. The laboratory equipment is being augmented by the Health Department to provide for the special type of studies.

The project is expected to develop the effects of various types of industrial wastes upon the stream and to establish methods of abatement of pollution in some cases where methods of treatment of the wastes have not been clearly established. Fish life, it is pointed out, are naturally being used in the study as providing a definite indication of the condition of a stream and the affects of pollution. The studies are designed to establish the effects upon fish of varying degrees of pollution which will serve as an indicator of the condition of a stream. If those effects are detrimental or fatal to fish life use of the stream for other purposes—public water supplies, recreation and as a source of water for industry will have been harmed or destroyed.

The project will be carried out with a grant made from Federal Funds. An appropriation was made by Congress upon the passage of the Federal anti-pollution law providing that grants shall be made to the states to carry on scientific investigations in the drive to abate pollution.

Warden Ottaway Reports:

Among the numerous muskellunge caught in Erie County waters this season are two which stand out. One measuring 50" and weighed 28 lbs. was taken from Lake Lebouf while the other weighing 25 lbs. and measuring 45" was caught in the West Branch of French Creek. Both these fine fish were taken during the month of October—so reports Fish Warden, Frank L. Ottaway of Erie County.

A catch which draws attention is one from the Raystown Branch of the Juniata River Area, surrounds the catching of a large wall-eyed pike. The wall-eye was caught by Donald Galbraith of Huntingdon. It measured 31" long and weighed 10½ lbs. Old timers in that area consider it one of the largest ever taken from those waters.

A Disgruntled Fisherman Gets Some Gripes Off His Chest

Sporting Goods Gripes

By William Boyd

I HAVE some pet peeves connected with the goods which sporting goods stores sell or do not sell. It's an accumulation of complaints connected with my recreation activities, and I'll wager there are any number of anglers who will agree with me 100 per cent.

First, and perhaps foremost, is dissatisfaction with the wearing qualities of available fishing creels. These creels come from Japan and China, and like so many other goods manufactured by our erstwhile slant-eyed allies and squat enemies are fragile indeed.

I have never owned a fish creel which has held up to suit me. After a few seasons the reed of which it is woven has rotted and the bottom has dropped out of the blasted thing. And even prior to this, the chances are the hinges of the lid have worn out or the fastener intended to keep the lid closed has broken.

Even in the case of leather-reinforced creels this has been true. These fish baskets just simply do not hold up as a quality-built creel would. And creels placed on the market shortly after the late war ended are even less durable than the unsatisfactory ones which the Japs and Chinese sent to the United States in pre-war days.

The creel which I now carry and which I attempted to make more serviceable by the application of a couple coats of shellac, followed by a coat or two of varnish, started to go to pieces in the middle of the first year I used it.

The reed loop through which a stick was passed to keep the lid closed tore out in no time at all. The basket, thanks largely to the shellac-varnish treatment I had given it, still was in pretty good condition and I didn't want to throw it away, so I devised a lid fastener. I took a skate strap and from it cut the buckle. This I fastened to the front of the basket by means of a long, soft rivet. The other part of the strap with the buckle holes in it I riveted to the lid. Now I can fasten the lid quite securely, but it shouldn't have been necessary for me to make major repairs to a fish creel a few months after I bought it.

Isn't it possible for some of our own energetic, ingenious fishing tackle manufacturers to make a fish creel that would really give service? Why can't baskets be made of plastics? They would have the added advantage of not absorbing a fish scent, as do reed creels, and should be easy to keep clean merely by washing or rinsing after fish have been removed from them.

Now lets direct a verbal blast of criticism at boots. I don't care for waders, simply because I would wear them only in the early spring when our Pennsylvania trout streams are filled with what feels like ice water. When bass season comes I much prefer to put on an old shirt, an old pair of trousers, and a pair of sneakers and wade right out to where the bass are feeding. After the day's fishing I take off the wet clothing and put on dry garments which I carry in the trunk of my car.

But a Pennsylvania angler would be flirting with pneumonia to try this in our trout streams in mid-April, so boots are necessary if one doesn't take to waders. Hip-length boots of lightweight rubber with heavy woolen socks covering the feet inside give all the protection that is necessary, but why do the manufacturers of rubber footwear persist in soleing them with hard, cleated rubber?

Such a boot bottom is the worst possible for wading our rock-bottomed streams, especially in the early spring when the round rocks and pebbles of the stream bed are covered with a slippery slime carried into the trout streams during the late winter or early spring freshets.

Hasn't anyone ever told the rubber company executives who design fishing boots that the hard rubber cleats are a positive menace to anglers? They serve satisfactorily in walking over a sandy bottom, but they result in many a discomforting tumble when an angler intent on luring a wily trout attempts to negotiate a rocky stream bed. I know for I had three spills early last spring and had to pull off and empty water-filled boots and fish in wet clothes the remainder of the day.



Oops! Rubber-cleated boots contribute to the ducking of an unprepared angler . . .

I'd suggest that boot makers turn out part of their boots with felt soles so the fellow who wanted to be certain of secure footing while fishing could have it. Some rubber companies make felt-soled boots, but most are hard rubber-cleated, making it necessary for us to cement felt to the soles and to tack it on the heels.

The only alternative is to buy cumbersome chain gadgets and fasten them over the boot bottoms or nail cleats onto the heels. And anyone who has done this knows what havoc these cleats play with the rubber or felt matting on the floor of his automobile.

Sometimes I wonder if hip boots, and considerable other fishing paraphernalia too, is designed by individuals who never went fishing. This must be true else they would devise a better method of holding up the tops of hip boots.

The strip of rubber buckled to the boot top and intended to loop over the trouser belt and snap fast has caused as much cussing on the part of fishermen as has the loss of fish after they have apparently been securely hooked. The fastener is either too tight or too loose or the strip of rubber slips in the buckle and the boot tops soon are down around one's knees. Further, the stretching, slippery rubber makes it a chore to unsnap the belt loop. It appears to me that canvas webbing, or something else less yielding and more durable than rubber, would be a big improvement.

I will admit that fishing tackle has been much improved in recent years but I also insist there's still a lot of room for further improvement.

There are other things connected with sports which I find difficult to understand. There's the case of the big department store where I have a charge account. This store put in a sporting goods department with a really good line of fishing tackle. This was just at the time I needed a new fishing rod so I looked over those in this new department.

The clerk who came to wait on me obviously didn't know the first thing about the merchandise he was expected to sell. He didn't even know how to put together the rod in which I was interested. Further, he frankly declared he wasn't a bit interested in learning how to assemble a fishing rod, for he never went fishing and had no desire to learn how to lure and yank a fish from the water.

There's another sporting goods store near this one where I have since bought my fishing and hunting supplies. Strangely enough, here too are many clerks who know very little

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Governor Dedicates Raccoon Park Lake!

First of Lakes Program Completed

Raccoon State Park, north of Burgettstown, which will provide a recreation center for many residents of Washington County, was formerly dedicated Monday, Oct. 24th by Gov. James H. Duff.

The ceremony marked the completion of the 102-acre dam, one of the major projects at the park and is the first lake to be completed in the Governor's Lakes-program.

After delivering the dedicatory address in which he declared stream purification was vital to the people of the state, Gov. Duff and Charles A. French, Executive Director of the State Fish Commission, spent half an hour in helping to place 400 large mouth bass, 2,000 Catfish and 2,000 bluegills of legal size in the newly created dam.

It is planned to permit fishing in the lake next year.

"Pennsylvania once had the most beautiful streams in all America. Now almost all of them are polluted. I think this park is a visible expression of what people want" said Governor Duff.

To further the work he "urged the people get behind the program for pure streams stocked with good fish." He said legal size fish were being placed in Raccoon dam so that fishing would be possible next year."

Continuing he asserted:

"Some people have criticized the cleaning up of the streams of the state as a waste of money but I do not think it is.

"The program has cost the state of Pennsylvania $35,000,000 but that is only a small part of what industries and municipalities are doing.

"I think the spending of money on pure streams and recreation spots is a wholesome use of funds. Places for the kids to develop normally are needed to help check Communism in America.

"Nobody is more pleased than I am that you have asked for this program and if you keep your eyes and ears open there is no reason why it should not be broadened by forthcoming administrations."

Admiral Milo F. Draemel, Secretary of Forests and Waters and in charge of the development of the Raccoon Park, presided at the Raccoon ceremony and introduced State Senator John M. Walker, Allegheny County, as chairman.



Gov. James H. Duff really beams as he delivers the dedicatory address at Raccoon Park Lake.



Gov. Duff places the first net of bass in Park Lake while C. A. French (left) Executive Director of the Pennsylvania Fish Commission, lends his hand.

The Fisherman's Friend

By DICK FORTNEY

I've had a good deal of respect and admiration for the sunfish since I glanced over a bridge railing one afternoon and saw a big sunfish guarding its nest in the water below.

For the fun of it, I dropped a pebble or two into the water and watched the sunfish catch the sinking pebble in its mouth and carry it away from the spot where its eggs were incubating.

As I watched a pickerel of good proportions approached the scene. It came within about two feet of the nest, and then the sunfish went into action. It smashed head-on- into the side of that big pike with such fury that the pike turned in a flash and sped out of sight.

That was a dramatic example of the spirit of the sunfish.

Since that day I have caught many of the brightly-colored little gamesters on a wide variety of fly rod and casting rod lures, and my liking for the sunfish has increased as a result.

Today I'll recommend, without reservations, the sunfish to any angler who is fed up with the sometimes tedious business of fishing for trout and bass.

Keep in mind this scientific fact: The bass, after all, is but one branch of the sunfish family of fishes!

For much too long a time the average angler has sort of looked down on the sunfish—and sometimes, sadly enough, with a sneer on his face—as a fish that was created for nothing more than to provide a species that small boys could catch with willow poles and worms.

True, sunfish can be caught with the simple tackle that small boys so often possess. But sunfish also can provide real sport for the most skilled angler using the most refined tackle.

In all, some 37 varieties of sunfishes inhabit the waters of the United States.

It is most abundant in inland waters from Maine to Georgia and from the Atlantic Coast to the Great Lakes, including the headwaters of the Mississippe River. Its domain is streams and ponds too warm for trout or too small for bass. It is a prolific breeder.

Nature has given the sunfish the ability to live among much larger fishes by equipping them with strong, spiny fins. Nature also has equipped the sunfish with a tremendous appetite, which is one reason small boys have so much fun with them.

But the sunfish also has the fish equivalent of brains—and that is why the experienced angler can enjoy fishing for it.

I have caught sunfish on all kinds of lures—spinners, wet and dry flies, streamers, nymphs, and even midget plugs. I've caught them by day and at night—and caught them a lot of times when the so-called game fishes were not active at all.

Even the largest sunfish is small when compared to a trout, bass, or pickerel. A common sunfish eight inches long is a lunker, although the bluegill sunfish grows much larger than that.

The casting rod is not good sunfish tackle. Taking a sunfish on a plug is something of an accident.

The fly rod is the instrument to use for sunfish, and since it is obvious that light tackle is called for, a rod weighing three or four ounces is plenty heavy enough. The leader should be around seven and a half feet long and tapered to 1X or 2X. The regular trout reel and line will complete the ensemble.

Sunfish are found in ponds and in the quiet eddies of creeks and rivers. Apparently they do most of their feeding below the surface of the water, although rising at times for surface forage.

The angler must move carefully and gently, for the sunfish is just as easily frightened as is a trout or bass.

There is one fact to fix firmly in mind before considering the lures to be used on sunfish. It is that the sunfish has a small mouth. Therefore, a lure that is too big and bulky has no place in the sunfish angler's equipment.

My favorite sunfish lures are a fly and spinner for fishing wet and a small, deer-hair bassbug for surface angling.

The No. 1 spinner and fly combination in my tackle box is a small, gold spinner (a single blade) and a midget streamer fly with a yellow body and lemon wood duck wings. Often sunfish will take bigger, double-bladed spinners and almost any kind of spinner fly, but the combination just described has worked best for me.

I have in mind a stretch of a certain bass creek where this spinner combination always produces a lot of action. The pool is long and of medium width and shallow enough that, by wading wet, one can make his way to midstream and fish down the whole length of the pool, casting the spinner toward the shores on either side of him.

There are a lot of large, flat rocks in the pool, and sunfish gang up in the vicinity of these rocks, often taking refuge under the rocks but always willing to emerge in pursuit of a spinner cast to a rock and then pulled away from it.



The Royal Coachman is an attractor—that is, it gets the attention of trout when stream conditions are low and clear and more conventional lures might be ignored.

Also, along one side of the pool there are several patches of aquatic plants growing up out of the water. Sunfish loiter in the vicinity of these grass patches too.

My fishing diary records the fact that one bright summer afternoon, wading down the length of this pool and casting the spinner as I went, I hooked 23 sunfish, some of them of really nice size. Meanwhile, two companions were drawing a blank while fishing for bass in the next pool upstream.

A deer-hair bug about an inch long, barbered close so that the body is no thicker than a pencil, and with a couple of gamecock hackles wound just back of the eye, is a swell sunfish lure.

It usually is worked on the surface, the angler casting it to likely spots and then gently twitching it as it floats with the current. At times, when this lure has become soaked through use, it can be allowed to sink a slight distance below the surface and fished as a wet fly.

The sunfish doesn't make such of a fuss when it strikes a floating lure of this kind, but it takes the fly with a determined rush and nine times out of ten securely hooks itself.

This tiny bug is entirely satisfactory without artificial coloring; that is, with a body made of the natural grayish hair from the body of a buck. Deer hair that has been dyed black or brown can also be used. Dark brown, grizzly, or black hackles are recommended.

The angler should not be without a couple of these bugs that are entirely white or that are of combined white and yellow. Occasionally they will produce strikes when the sunfish ignore the darker lures.

Incidentally, the fly and spinner will produce the most action during the bright hours of the day. The tiny bassburg is especially good in the early evening—sometimes even after darkness has fallen.

There is a good variety of patterns of wet flies for sunfish. Flies in Size 10 or Size 12 are best, and it may be necessary to pinch a bit of split shot on the leader to get the fly down into the water. It should be allowed to sink to a fair depth, then retrieved with short, gentle jerks.

Good patterns of wet flies for sunfish include the Professor, McGinty, Coachman, Bee, Royal Coachman, and Gold-ribbed Hare's Ear.

Regular trout flies also will take sunfish both on the surface and down in the water if used much the same as in trout angling.

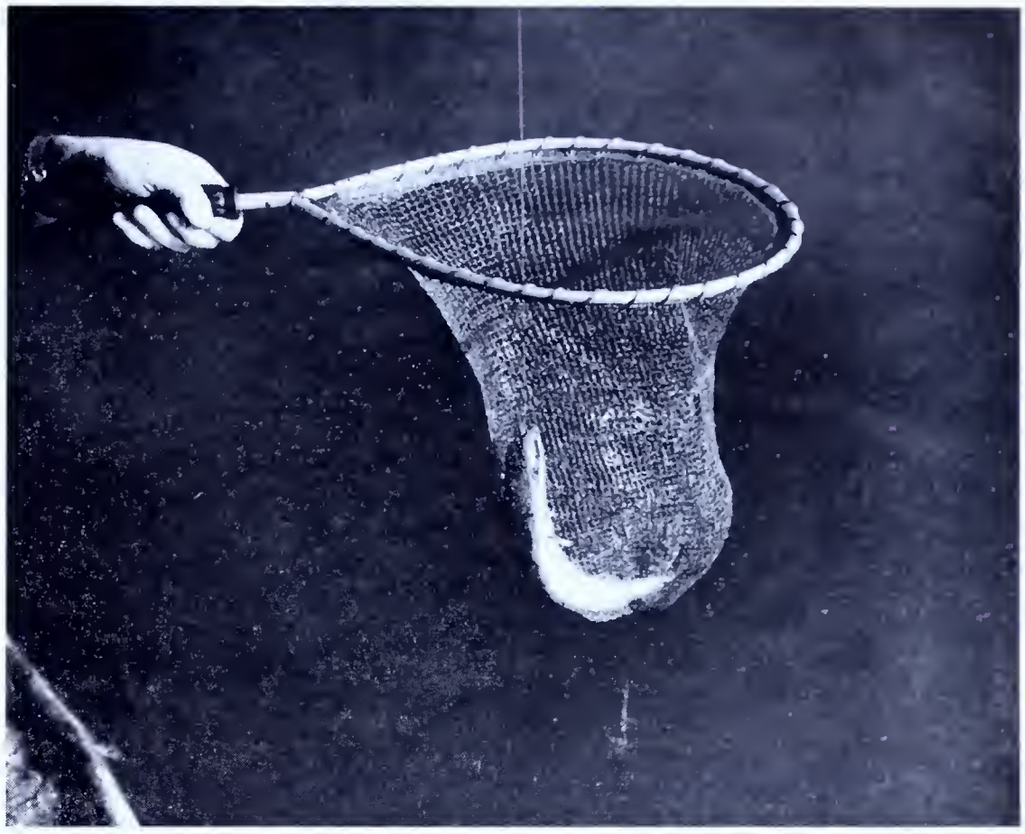
One of the most interesting times to angle for sunfish is at that half-dark moment in early evening when these little gamesters usually go on a spree of surface fishing. Each rise is marked by a dimple and swirl on the surface. If a small bug or fly is cast to the immediate vicinity of one of these surface disturbances the angler usually can expect a lusty rise from the fish.

As previously said, the plug rod was not designed for sunfish angling, although the larger sunfish will strike at midget sizes of surface and underwater plugs.

And then, if all else fails, a fellow always can dig up a couple of worms and have some fun with the sunfish.

Small boys do. And men are just small boys who have lived long enough to acquire whiskers and wear long trousers.

Landing Nets Made of Rustproof Wire Cloth



Landing net fillers are now being made of rustproof metal mesh and they can be used with any standard fish landing gear. They weigh approximately two ounces and are manufactured in two sizes, for both boat and stream type landing net frames. Produced by Buffalo Rod Company, Buffalo, N. Y., the new nets have a high degree of flexibility and strength, which permit them to adjust quickly to many types and sizes of fish. A single strand of Monel wire is knitted into cylindrical form with hinge type stitches, making it easy to disengage hooks that may become caught. The Monel wire also affords excellent resistance to tearing when snagged, because of the high tensile strength and toughness of the metal. The filler is secured to the landing net frame with Monel lacing, which is provided with each net.

Minnie: "You look all out of sorts. What's the matter?"

Nellie: "Plenty. On account of my rheumatism the doctor told me to avoid all dampness—and you've no idea how silly I feel sitting in an empty bathtub and going over myself with a vacuum cleaner."

A sparsely tied all black bucktail with silver tinsel body works wonders on brown and rainbow trout. The hair from a skunk tail is best, tie it a little long so it wiggles.

SPORTING GOODS GRIPES

(*Turn to Page* 11)

about the goods they sell. I have seen them sell some of the strangest things to boys and even adults who were just starting out in fishing and didn't know what they should have.

Just one more thing and then I'll end this gripe session. Why do not one or another of the big concerns which market flies print charts with colored illustrations of the most effective flies so that the fellow who is just beginning to fly fish will have a pretty definite idea of what these popular flies actually look like?

Such a chart surely would be helpful and, I'll wager, would find a permanent place in the fishing tackle box of the chap who acquired it.

Two negroes who had not seen each other in five years discovered each had married during this time.

"What kinda woman did you-all get, Mose?" asked Rastus.

"She's an angel, Rastus, dat's what she is."

"Boy, you is lucky. Mine's still living," Rastus muttered sorrowfully.

PENNSYLVANIA REPTILES & AMPHIBIANS

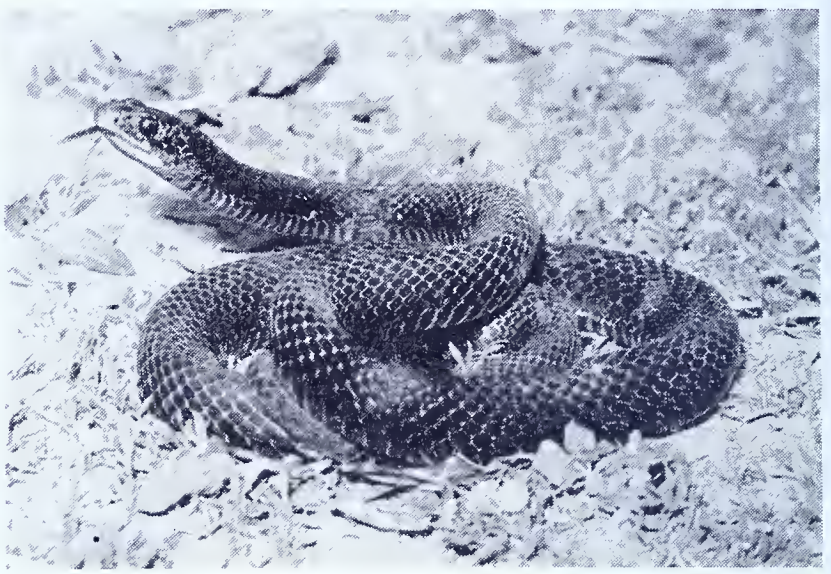
A Picture Story by Hal H. Harrison

(Edited and approved by M. Graham Netting, Curator of Herpetology, Carnegie Museum)

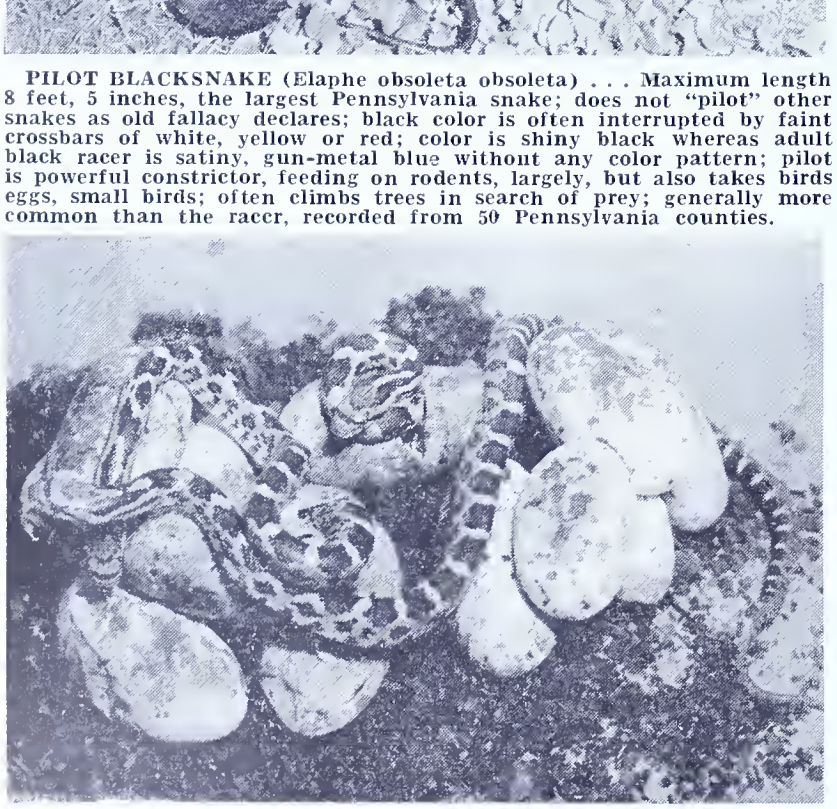
No. 9 Blacksnakes



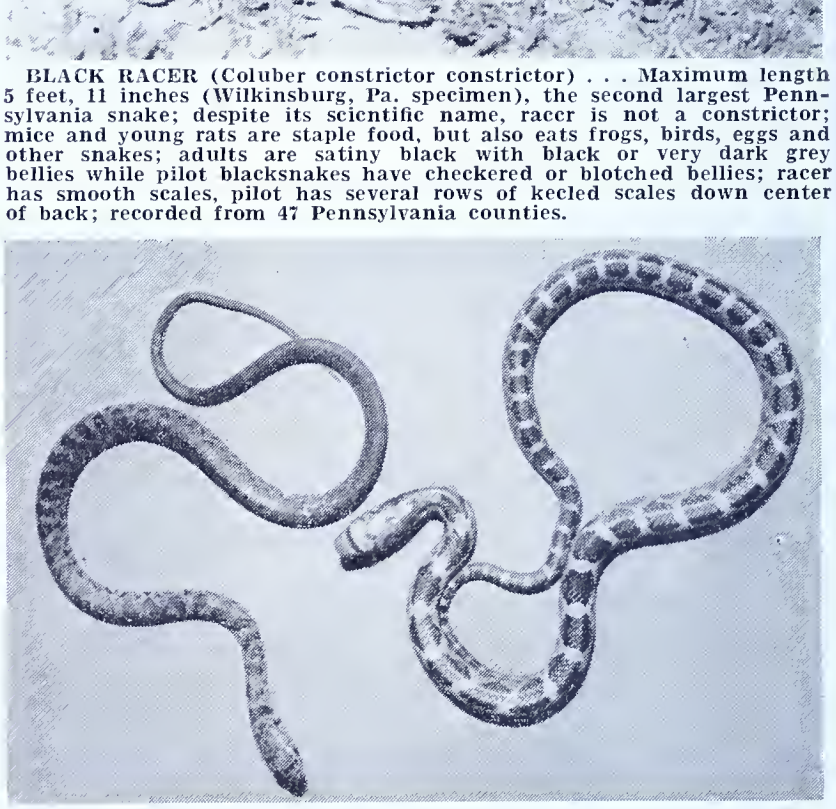
PILOT BLACKSNAKE (Elaphe obsoleta obsoleta) . . . Maximum length 8 feet, 5 inches, the largest Pennsylvania snake; does not "pilot" other snakes as old fallacy declares; black color is often interrupted by faint crossbars of white, yellow or red; color is shiny black whereas adult black racer is satiny, gun-metal blue without any color pattern; pilot is powerful constrictor, feeding on rodents, largely, but also takes birds eggs, small birds; often climbs trees in search of prey; generally more common than the racer, recorded from 50 Pennsylvania counties.



BLACK RACER (Coluber constrictor constrictor) . . . Maximum length 5 feet, 11 inches (Wilkinsburg, Pa. specimen), the second largest Pennsylvania snake; despite its scientific name, racer is not a constrictor; mice and young rats are staple food, but also eats frogs, birds, eggs and other snakes; adults are satiny black with black or very dark grey bellies while pilot blacksnakes have checkered or blotched bellies; racer has smooth scales, pilot has several rows of keeled scales down center of back; recorded from 47 Pennsylvania counties.



BLACKSNAKE EGGS HATCHING . . . Both species of blacksnakes lay eggs in June or July in earth, sawdust, manure piles or decayed wood; eggs usually number from one to two dozen; hatching usually occurs in August; eggs are about two inches long and almost an inch in diameter; they are leathery in texture; cream-colored when laid, the eggs soon become stained from surrounding material.



YOUNG BLACKSNAKES . . . The hatchling on the left is a black racer, the one on the right is a pilot blacksnake; baby racers are marked with 50 or more squarish brown spots from neck to base of tail, baby pilot blacksnakes have 40 or fewer, odd-shaped spots; baby racers are 8 to 12 inches long, baby pilots are about 14 inches long; bright patterns of juveniles gradually disappear as snakes approach maturity.



BOY HOLDING LIVE BLACKSNAKE . . . Thanks to the influence of intelligent education, especially in schools, Boy Scout troops, Y. M. C. A.'s etc., old superstitions and fallacies concerning snakes are gradually disappearing; while blacksnakes may inflict slight wounds with their teeth when provoked to attack, they are harmless when properly handled as above; many farmers have learned the value of blacksnakes as rat and mouse-killers and thus protect them.



NORTHERN KING SNAKE (Lampropeltis getulus getulus) . . . Maximum length 5 feet, 9 inches; while this reptile is a "black" snake, it belongs to a distinct group of king and milk snakes; black body is crossed by yellow or white bands; food is other snakes and rodents; king snakes are immune to venom of poisonous species; this species barely enters Pennsylvania in the southeast, having been found in Lancaster County rarely.

The Liverworts

(Marchantia and Riccia)

By ROBERT LEO SMITH



This 10½ lbs., 28" catfish was caught on September 21 in the Juniata River by Clarence Harris of Huntingdon. The cattie was taken on a plug.

One summer day, as I was wading along the edge of a creek, I happened to notice a mossy, dark green growth on the cut-away side of the bank. Examining it, I found it to be something I had been looking for—a colony of Marchantia.

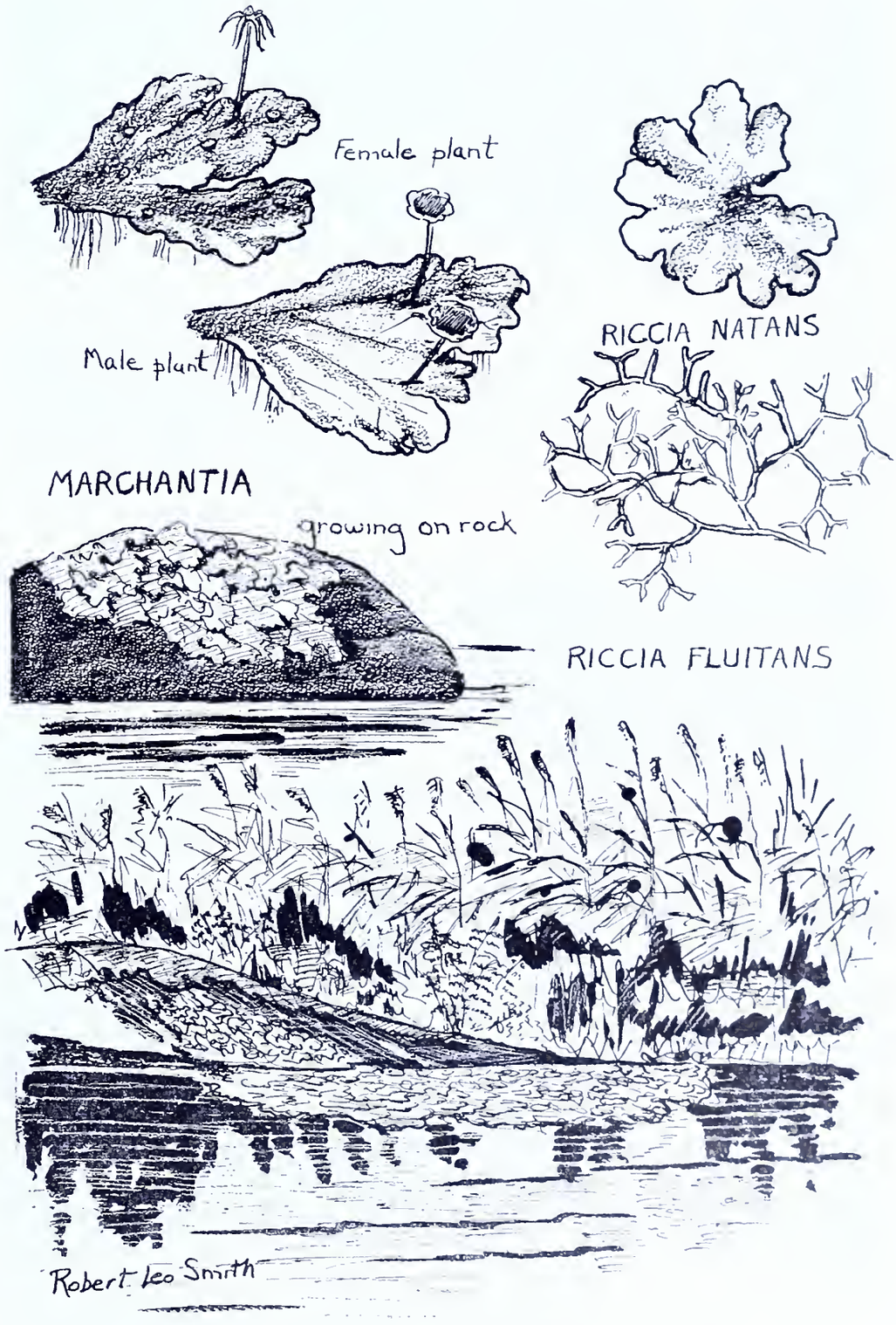
It is one of the liverworts, a family of plants closely related to the algae. At one time all of the liverworts probably were aquatic, but now the most of them prefer to grow on shaded, moist places near a stream.

Marchantia grows on damp banks or on exposed rocks in small shaded streams. A colony of these plants, on a quick glance, might be mistaken for moss, although Marchantia is quite different. The plants have distinct upper and lower surfaces, while mosses grow upright. The individual plant of Marchantia looks very much like a leaf. The upper surface of this "leaf", known as a thallus, is green for it contains the chlorophyll which manufactures the food for the plant. The lower surface of the thallus is nearly colorless and here much of the plant's food is stored. This leaf-like structure is attached to the earth by small, hair-like rhizoids that originate on the lower surface of the plant.

Floating on the surface of the water near to shore, I found still another kind of liverwort, the aquatic riccia. There are two species. The one, *Riccia natans,* is a heart-shaped, leaf-like plant that grows on the surface of the water. The other, *Ricca fluitans.* has a branched thallus two or three inches long that resembles algae. It grows beneath the water's surface, often among the duckweeds.

The liverworts increase in several ways. The growing tips of the thallus may continue to develop while the central portion decays, finally separating the branches and thus forming several new plants. In Marchantia, the thallus produces buds in small cuplets on the upper surface of the plant. When the buds fall on the ground they grow into new thalli.

Liverworts reproduce sexually, also. The male and female reproductive organs may develop on the same thallus or on two different plants. These produce a small capsule within which develops spores. In Marchantia, when the capsules, which depend on the old decaying plants for food, ripen they split open and the spores are released. In riccia the spores remain in the capsule until the old thallus is decayed. After being set free, the spores germinate to produce new plants next year.



Pennsylvania Fish Law Violations

Cases Settled During the Month of October 1949

ADAMS COUNTY

McClarin, Mrs. Cecil, Dicks Dam, New Oxford, Pa. Fishing without a license $25.00

Sandoe, George D., R. D. 1, Aspers, Pa. Exceeding creel limit 20.00

ALLEGHENY COUNTY

Andrechak, Emer L., 634 40th St., McKeesport, Pa. Fishing without a license 25.00

Grego, William B., W. Homestead, Pa. Trolling from motor boat while in motion 20.00

Gutierrez, Arthur J., 1215 Meadow Ave., McKeesport, Pa. Fishing without a license 25.00

Hensel, Samuel D., 903 Maple Ave., Turtle Creek, Pa. Illegal operation of motor boat 10.00

Hichman, Robert, 926 Locust Ave., McKeesport, Pa. Illegal operation of motorboat 10.00

Kraenter, Philip H., 20 M Midway Drive, Whitaker, Pa. Troling from motorboat while in motion 20.00

Pfahler, Ralph R., 5858 Baum Blvd., Pittsburgh 6, Pa. Operating motorboat without displaying license plates 10.00

Sobeck, Michael, G., 140 Zewe Way, Duquesne, Pa. Operating motor boat without a license 10.00

ARMSTRONG COUNTY

Fracchia, Louis, Box 140, Apollo, Pa. Exceeding creel limit 10.00

BERKS COUNTY

Harmony, Charles H., R. D. 1, Mertztown, Pa. Two undersized pickerel 20.00

Hummel, Paul W., 108 Dwight-Spring Mt., West Lawn, Pa. Exceeding creel limit 30.00

Row, Robert D., R. D. 1., Temple, Pa. Fishing without a license 25.00

BLAIR COUNTY

Erb, James A., 304 Poe Place, Altoona, Pa. Exceeding creel limit 70.00

Erb, James A., 304 Poe Place, Altoona, Pa. Exceeding creel limit 10.00

Jones, Ralph V., R. D. 3, Altoona, Pa. Exceeding creel limit 80.00

BRADFORD COUNTY

Campbell, Bruce, R. D. 3, Wyalusing, Pa., Exceeding creel limit 100.00

Wyoder, William H., R. D. 1, Towanda, Pa. Operating motorboat without license 10.00

CAMBRIA COUNTY

Bertagnolli, Alfred, Beaverdale, Pa. Using illegal devices 20.00

Jackson, Charles L., 309 Bradley Ave., Jonestown, Pa. Two undersized black bass 20.00

CLINTON COUNTY

Scarafini, M, P., 147-14th St., Renovo, Pa., Violation of the rules and regulations on Youngwoman's Creek .. 20.00

Scarafini, M. P., 147-14th St., Renovo, Pa. Two undersized trout 20.00

CRAWFORD COUNTY

Clawson, John H., R. F. D. 1, Saegertown, Pa. Fishing without a license 25.00

HUNTINGDON COUNTY

Ohler, Ellsworth, Aitch, Pa. Fishing with a borrowed license 25.00

INDIANA COUNTY

Shaffer, Bruce M., Box 210, Josephine, Pa. One line not under immediate control 20.00

LACKAWANNA COUNTY

Prosperi, Olimpic, 106 Powell St., Old Forge, Pa. One undersized bass .. 10.00

Zalewshi, Walter A., 718 Boulevard, Dickson City, Pa. Lines not under immediate control 20.00

LAWRENCE COUNTY

Seialdone, Luidi, 516 Hazel Ave., Ellwood City, Pa. Operating motorboat without a license 10.00

LEHIGH COUNTY

Herman, Charles, 604 Cleveland St., Allentown, Pa. One undersized pickerel 10.00

LUZERNE COUNTY

Capece, Joe, Janette St., Mocanaqua, Pa. Exceeding creel limit 10.00

Fischette, Donote, Main St., Mocanaqua, Pa. Exceeding creel limit. .. 10.00

Orlando, Joe, 13 Ensign St., W. Wyoming, Pa. One undersized black bass 10.00

Seward, Arthur, R. D. No. 1, Shickshinny, Pa. Two undersized bass .. 20.00

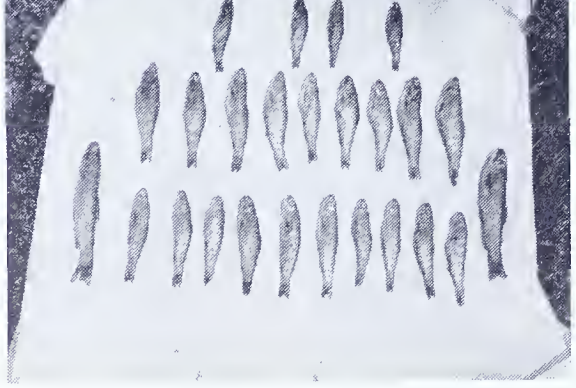
Smith, Charles E., 30½ E. Broad St., Hazleton, Pa. Operating motorboat without displaying license plates .. 10.00

Stalay, Curtis, 179 Hazel St., Wilkes-Barre, Pa. Catching tadpoles on Sunday 10.00

Steinhauer, Edward L., 54 Chapel St., Wilkes-Barre, Pa. Using illegal device 20.00

Weznick, Michael, 112 Yosak St., Swoyerville, Pa. Fishing without a license 25.00

Zadruzny, Frank, 166 Kosack St., Swoyerville, Pa. One undersized bass 10.00



This catch of 25 trout, 23 of which were under size were caught by Willard Hulling of Petersburg, Pa. The creel cost Mr. Hulling $230 plus cost which was forthwith paid.

LYCOMING COUNTY

Peacock, George T., 1010 W. 3rd St., Williamsport, Pa. One undersized black bass 10.00

NORTHUMBERLAND COUNTY

Moyer, Gene L., 320 N. 6th St., Sunbury, Pa. Shooting fish with a 22 cal. rifle 20.00

Moyer, Gene L., 320 N. 6th St., Sunbury, Pa. Fishing without a license 25.00

Moyer, Luke, 804 N. 6th St., Sunbury, Pa. Shooting fish with an automatic pistol 20.00

Moyer, Luke, 804 N. 6th St., Sunbury, Pa. Fishing without a license 25.00

PERRY COUNTY

Morris, W. B., 18 Altoona St., Enola, Pa. One undersized bass 10.00

PHILADELPHIA COUNTY

Bibbs, Joseph, 2041 N. 12th St., Philadelphia, Pa. Fishing without a license 25.00

Bauss, John P., 2141 N. 9th St., Philadelphia, Pa. Exceeding creel limit 20.00

Paulin, Charles W., 2341 W. Columbia Ave., Philadelphia, Pa. Exceeding creel limit 20.00

Wheeler, Cleveland, 2428 Nassau St., Philadelphia, Pa. Fishing without a license 25.00

SCHUYLKILL COUNTY

Titus, Benjamin I., R. D. 2, Tamaqua, Pa. Exceeding creel limit 50.00

WARREN COUNTY

Williams, Herbert R., Box 8, Corydon, Pa. Having one live box in Allegheny River without proper tag .. 20.00

WASHINGTON COUNTY

Beam, Arthur D., 219 2nd St., Monongahela, Pa. One undersized black bass 10.00

Densen, Augustus O., R. D. 3, Canonsburg, Pa. Fishing with borrowed license 25.00

Miller, Walter G., 123½ College St., Canonsburg, Pa. Operating motor boat without a license 10.00

WESTMORELAND COUNTY

Ference, Andrew, R. D. No. 1, Hahntown Rd., Irwin, Pa. Using illegal devices 20.00

WYOMING COUNTY

Skevronsky, Joseph, R. D. No. 2, Tunkhannock, Pa. Exceeding creel limit 100.00

YORK COUNTY

Hoffman, Charles J., 41 N. Penn St., York, Pa. Operating motor boat without displaying license plates .. 5.00

OUT OF STATE

Stevens, Evan T., 1702 Sycamore St., Wilmington, Del. Fishing without a license 25.00

Noyes, Jesse E., R. D. No. 2, Vestal, N. Y. Exceeding creel limit 10.00

Bentley, Dean A., 2271 Parkwood, Toledo, Ohio. Fishing without a license 25.00

A New Wrinkle in Plugs!

Five Tenite plugs, each different in size and shape, plus a single harness which can be used with all, comprise a useful bait-casting set called the "Jac-Pot." The set eliminates the burden of a tackle box. Not only do the five plugs in the "Jac-Pot" duplicate a tackle-boxful of conventional plugs, according to the manufacturer, but the hookless bodies can be carried safely in the pocket without danger of tears or snags. Thus carried, they are always within easy reach for instant use. Another talking point: without hooks, the lures make fine practice plugs.

The hook-attaching unit consists of a wire harness, two treble hooks, and a shield which is also the harness lock. The harness fits in longitudinal grooves around the plug body. Attach the swivel snap to the harness



eyelet, and the bait is ready to use. No tools are needed.

The assortment of Tenite lures in the "Jac-Pot" includes the "Red Head," "Perch," "Pike," "Frog," and "Tail Wiggler." Each has a variety of actions. By making slight adjustments in the shield and hook-attaching unit, each plug can be used as a shallow, deep-running, or surface lure, or as an excellent aggravating popper. By removing the tail hook from the harness and attaching the "Tail Wiggler" at tail hook position, the bait becomes—with another plug inserted in the harness—a jointed lure.

The Tenite plugs are tough and durable under heavy impact. Colors that attract fish are applied to the bodies by using lacquers which have an affinity with the plastic. Tenite has low moisture absorption and is resistant to exposure.

If the tables were turned
And we were underfed,
Would Europe eat less
To send us bread?

Clerk: Who were your mother and father before they were married?

Applicant: I didn't have a father and mother before they were married.



(Times Photo by Greskovic)

LACKAWANNA COUNTY SPORTSMEN HOLD RALLY

The Lackawanna County Federation of Sportsmen's Clubs held its annual booster rally Wednesday night, October 19th, when more than 450 members and friends gathered at Koch-Conley American Legion Home, North Washington Avenue, Scranton.

Those in the picture are, first row, seated, left to right: Paul Bittenbender, Forty Fort, member Pennsylvania State Fish Commission; Jack L. Neiger, Federation president; Ben K. Williams, Stroudsburg, member Pennsylvania State Game Commission, and Tony Colucci, Federation treasurer. Second row, standing, from left: Frank Galonis, Federation secretary; Watkin Phillips, Federation vice president; Philip Sloan, new Lackawanna County Game Warden; Steve Emanuel, chairman of the Northeastern Division of the Pennsylvania Federation of Sportsmen's Clubs; Carl Stainbrook, Division Supervisor of the Pennsylvania Game Commission, and Charles Nehf, editor of Pennsylvania Federation Game News.



Foster Shaw of Oil City and the fine trout he caught on July 28 from the Coldwell Creek near Titusville. The trout measured 24" long and weighed 4½ lbs. Foss, who ties his own dry and wet flies, is recognized among the purists of the Venango County area.



Johnny Lewis, 12 year old son of Harry Lewis of Frackville, and the 3 nice pickerel he caught in Cobbs Pond, Wayne County. Johnny used the Johnson Spoon and did a nice job.

Make it a Fishing Book Christmas



By HUGH JOHNSON

WHAT SHALL I GET for brother Ben for Christmas? And what shall I hint around for the other members of the family to get for *me*? Well, you're a fisherman or you wouldn't be reading THE PENNSYLVANIA ANGLER and you're interested in books or you wouldn't be reading this particular column, so let's consider books as gifts.

Books are wonderful gifts anyway, but specifically, a good fishing book for a fisherman is the acme of appropriateness. You are going right to the heart of the man—feeding his hobby, and the gratitude for such bull's-eye thoughtfulness is far out of proportion to the few dollars spent. He will enjoy the first reading, and through the years the very fact that he *owns* the book and can taste its contents whenever he pleases or can simply fondle the pages and illustrations, constitutes a friendly, continuing satisfaction that most other possessions don't afford. People *keep* books through thick and thin because, like a flag or a photograph or a faithful old fly rod, the value of a good book increases through the years and cannot be measured in terms of the coin originally spent for it.

Furthermore, a book received as a gift from a friend is forever associated with that friend. For example, every time I pick up my copy of *Pools and Ripples* by Bliss Perry inscribed simply "With best of luck—Ed", or *A Book of Trout Flies* by Preston Jennings, a gift from Bill or *Thy Rod and Thy Creel* by Odell Shepard with the author's own inscription "For Hugh Johnson, may he cast his flies into beauty and draw them back over waters of peace"—every time I read these books or simply look at them on the shelves, I think warmly of the donors and say "Thank you!" again.

To help ANGLER readers make this a fishing book Christmas, here is a list of books, most of which have been reviewed in this column during the past year (the month in which each title was reviewed is parenthetically indicated in the list), representing what I think are the best fishing books for the Pennsylvania angler published in recent years. Out-of-print books are not listed. You can get the books listed at any good bookstore or by ordering direct from the publisher. For your fishing Dad, brother, son or daughter, or buddy, make it a fishing book Christmas. And you can toss quiet hints around for yourself, too—just check the book or books on this list that you want and leave the ANGLER open to this page, in prominent display around the house.

For the Young Angler

LET'S GO FISHING by Lee Wulff. Ages 8-11. (February 1949) J. B. Lippincott Co., E. Washington Sq., Phila. 5, Pa. $1.75.

THE BOYS COMPLETE BOOK OF FRESH AND SALT WATER FISHING by Ollie Rodman and Edward Janes. Ages 12-up (September 1949) Little, Brown & Co., Boston, Mass. $3.50.

For Adults

THE COMPLETE FLY FISHERMAN: The Notes and Letters of Theodore Gordon, edited and with an Introduction by John McDonald. (February 1949) Chas. Scribner's Sons, 597 Fifth Ave., New York 17, N. Y. $7.50.

STREAMSIDE GUIDE TO NATURALS AND THEIR IMITATIONS by Art Flick. (February 1949) G. P. Putnam's Sons, 2 West 45th St., New York 19, N. Y. $3.00.

TROUT FISHING by Dan Holland (October 1949) Thomas Y. Crowell Co., New York, N. Y. $5.00.

A BOOK OF TROUT FLIES by Preston Jennings. (February 1949) Crown Publishers, 419 Fourth Ave., New York, N. Y. $7.50.

A TROUT AND SALMON FISHERMAN FOR SEVENTY-FIVE YEARS by Edward R. Hewitt. (January 1949) Chas. Scribner's Sons. $4.50.

LEE WULFF'S HANDBOOK OF FRESH WATER FISHING by Lee Wulff. (February 1949) J. B. Lippincott Co. $2.50.

FLY PATTERNS AND THEIR ORIGINS by "Dike" Smedley. (April 1949) Westshore Publications, Muskegon, Michigan. $2.50.

FRESH WATER FISHING by Arthur H. Carhart. (June 1949) A. S. Barnes Co., New York, N. Y. $5.00.

TILL FISH US DO PART by Beatrice Cook. (May 1949) William Morrow & Co., 425 Fourth Ave., New York 16, N. Y. $3.00. (This is one for *you* to give to your wife!)

TROUT AND SALMON FISHING by John E. Hutton. (November 1949) Little, Brown & Co. $5.00.

LUCAS ON BASS FISHING by Jason Lucas. (March 1949) Dodd, Mead & Co., 432 Fourth Ave., New York, N. Y. $5.00.

BLACK BASS by John Alden Knight. (August 1949) G. P. Putnam's Sons. $4.00.

TROUT WATERS AND HOW TO FISH THEM by Joseph D. Bates, Jr. This is a magnificent all-round job, just published, that will be reviewd at length in the January 1950 ANGLER. Little, Brown & Co. $6.00.

IN DEFENSE OF WORMS by Frederick F. Van de Water. A new book that has just come in. It will delight the worm fishermen and all others who have not lost the humble perspective of Izaak Walton. This collection of charming essays is the closest thing to a real angling classic since Bliss Perry's *Pools and Ripples*. To be reviewed in the January 1950 ANGLER. Duell, Sloan & Pearce, 270 Madison Ave., New York 16, N. Y. $2.50.

FLY-TYING by William Bayard Sturgis. Everything for the fly-tyer. A complete "textbook". Chas. Scribner's Sons. $3.50.

A GOOD FISHING BOOK THE PERFECT GIFT FOR A FISHERMAN



E. E. Apel

in the Cresson Mainliner and Dispatch

Just to give you an idea how some of these tall tall fish stories originate, I'll try and record a recent incident as it happened.

Two local fellows stopped in McVicker's early one morning for their coffee. It being early in the trout season the conversation was about fishing, and the luck of local anglers.

Jokingly, Clate remarked to his two customers, "Did you hear about the walloping big trout that John Verba caught yesterday?"

"No, where did he get it? What kind was it?" they asked.

"He caught it down at Spring Creek. It was a dandy rainbow, heavy too," came the answers.

At this point of the discussion Clate was called away for a few minutes. While he was absent, customer A said to customer B, "I'm glad to hear about Verba getting a big trout, but I was under the impression that John didn't go fishing. Well, I gotta leave or I'll be late for work."

"I've gotta go to the postoffice—see you later," said customer B.

The two of them left before Clate came back to tell them he was "kidding," and that A's assumption was correct, for Verba doesn't go fishing.

The fellow who went to the Post office told Jimmy Nash's gang about Verba's good fortune. The other coffee-drinker spread

the news at the bank and later at Jones' News Agency. So, the news got around and as it spread the fish grew proportionately. By evening it had grown to 28½ inches and weighed 8 pounds. What started out to be a little innocent joking had developed into a whopper of a mouth-to-ear tall fish story.

But that isn't the end. The pay-off came during the evening when Clate strolled up Main street. He got up the street about a block when he was confidentially buttonholed by a most convincing "news" carrier.

"Did you hear about John Verba's big brown trout?" he was asked.

Clate suspected he was in for a "ribbing" of some sort because of his utterances of the morning and was totally unprepared for the flow of words that followed his negative reply to the question.

"Yep," said his interrogator, "Verba really caught an old lunker of a brownie yesterday. Down on Spring Creek. I saw him land it. Boy! did that fish ever fight, but John played him the way a big trout has to be played and after an hour and a half he landed him. Wouldn't let anybody help him, either. He netted it himself. It weighed 8 pounds by the fish warden's scales. I wish you could've seen that fish and the way Verba played it. Maybe he'll get it mounted. I hope so, for I've never seen a prettier brownie. Nice trim fish and well marked. Funny thing—Verba chewed up his whole supply of cigars while he was playing that monster. Bet he "cops" all the local prizes with that trout What do you think?"

"I don't know what to think," said Clate. And this time he wasn't kidding, for he could scarce believe his remarks of such ridiculous aspects—even to the extent of the trout changing specie.

Weedless Bass Bug

By DON BLAIR

Here and there among the weeds of Pennsylvania's lakes and ponds hang various cork bodied bass bugs. No doubt some belong to other anglers; but by times it seems as if we lost 'em all.

Not only are the lost bugs gone but a great many good fish have been scared by the queer antics of a man trying to retrieve a bug. Too, there has been from time to time a considerable, and in the light of present knowledge, wholly unnecessary expenditure of energy in this direction. Energy that, as Charlie says, might better be expended scaling fish.

Cork bodied bass bugs, like horseless carriages, are undoubtedly here to stay. Unfortunately, if a cork bug is to be a good fish getter it needs a wide mouthed hook, plenty of clearance between body and barb. This of course is exactly what is needed to catch the most weeds.

So when the bass fishing fever strikes, you buy or make a bug according to these specifications, hasten to the nearest pond or lake and you fish around in open water until a big bass crashes back in amongst the weeds. And there you go. Pretty soon you are back at the counter or at your workbench choosing or whittling a new bug. There may be a lake somewhere where big bass cruise in clean open water while the little fellows splash in the weedy sections. If such a lake exists, I know it not; and I doubt that it is fished by mortal men.

All of which leads us to a description of a successful application of the weedguard principle to a cork bodied bass bug. They say necessity is the mother of invention, and in that respect I am willing to confess this little novelty was born of desperation. When you are hip deep in muck and water, surrounded by bass and spatterdocks, you're desperate!

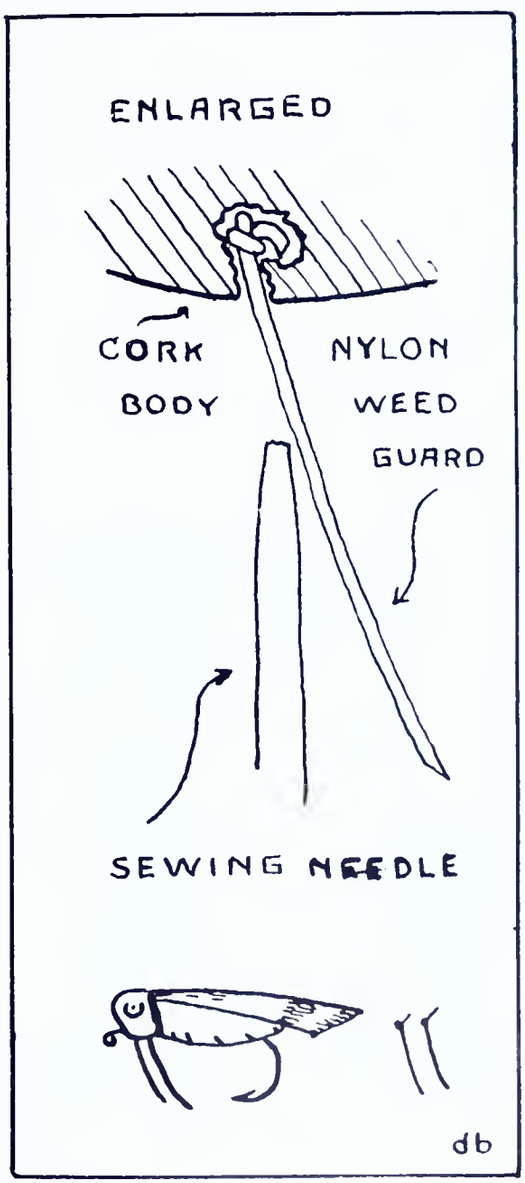
The drawing shows the method of attaching the weed guards to a cork bug. The guards are made of nylon leader, of a strength proportional to the weight of the whole lure. For a small bug on a No. 8 hook use six pound nylon. Heavier bugs want heavier leader material in the weed guards. By tying the knot as illustrated the weed guards are securely anchored inside the cork body without the necessity for cementing or tying them in place. They will stay put if there is life in the cork. Use a heavy needle to press home the knotted ends. It works better with the point broken off.

After you have fixed up some bugs with these weed guards I suggest you use a heavy leader. Eight or even ten pound stuff is not too light. In the first place, though you will find your weedless bug slips through most top water weeds easily, it is still possible to get hung up. The guards are not 100% effective. However, the snags are not usually so firm as with the unguarded hook. A slow steady pull will ordinarily free the lure with a minimum of commotion. *Perhaps the nicety of bigmouth bass fishing lies in making just enough commotion to attract the fish, without scaring him.* A rugged leader will get your lure out of some places where you would be sure to frighten the fish if you had to go get your lure.

Secondly, when you hook a fish in these surroundings you don't get the ripping, splashing battle you expect in open water. Usually Sir Bigmouth throws a couple of half hitches around a mess of weed stems and hangs up helpless. He does, that is, if your leader can stand the strain. Not that it must be strong enough to hold the dead weight of the fish. There is a resiliency in the tangled weeds that stops him from getting a solid pull. I would wager a ten pound bass cannot break a ten pound leader by snarling it in the spatterdocks or lily stems. Though I hasten to relate, somewhat sadly, I have not yet had that glorious situation arise.

Once he has done with his tangling it is your move to pick him out. If he is a two hand bass, that is, if he is big enough to make you drop your rod and grab with both hands, he is a dandy and I am glad you got him.

We have long since reached the conclusion that picking two hand bass is a lot more fun than picking watermelons. Fix up a weedless bass bug and get in there after them.



Angling From the Tree Tops

(*From page 8*)

ers, casting about, covering a large area, but nearly always returning to the same general vicinity. These babies require a lure fished at the right depth, for they usually hold about the same level throughout their dining period. And they like a slowly moving lure, for depth is not conducive to speed.

The boys feeding in the shallows are like men in a soup line, there to get fed and not caring who knows it. Anything with lots of action or flash will appeal to them, and delicacy of presentation is not too much a factor, since such fish want to gorge quickly and get back to the safety of deep water.

While spying on the finy tribe, remember the object is to see, not to be seen, and guide yourself accordingly. If a suitable location does not provide both view and cover, sacrifice cover, but make your moves few and far between. Make them slowly, and eschew bright clothing. A good spy doesn't necessarily have to be one whose pants are dragging his tracks out, but any other camouflage will help. Stilts are considered unethical, besides, most insurance policies have a clause covering them.

Also, the way to catch fish is to go fishing, which is just where I'm going. But maybe I'd better read this article again, and maybe then I can catch a fish. At least I'll see one, which is more than my wife has done for a long time.



Pete Carbaugh of Newton Hamilton and the large carp he caught from the Juniata River on July 29. The fish measured 43" long and weighed 47 lbs.

The Deadliest Fly

By LEE PRUITT

Anglers will argue pro and con as long as trout streams flow, on the relative merits of this fly or that. I will put in my two cents worth by stating that the best fly is the one you take fish on. Some swear by the black gnat, others claim a quill gordon fished dry will pay off the mortgage. Still others take out insurance on the fawning royal coachman. The ginger quill, gray nymph, yellow Sally, variant and brown hackle all have their devotees. Some fish with streamers exclusively and to this department mickey finn, yellow tiger, black ghost and wardens worry are magic names. And hereby, as they used to say, hangs a tale.

Some years ago a friend and I painfully got up before dawn one May morning and headed for Fishing Creek. I want to forever remember this great day because we arrived intact at streamside. No flat tires, thunder storms or torn up roads marred our journey. We forgot nothing (I usually fill my thermos with hot coffee then drive off without it). Everything was perfect. I even remembered to shave. The waitress at a roadside inn where we stopped for coffee actually beamed at us. It was our day to howl.

Well, to get down to business, and *what* a business? We started fishing. My pal bent on a dry brown hackle and I fished wet (very wet, I fell in three times). Anyhow, I was using a wet black gnat tied on a size 10 hook. In a few minutes both of us had good fish on. Rainbows were on a feeding spree that day and wet or dry, they took. We tired of using one type of fly and fished streamers, floaters, nymphs and bucktails. All took fish and towards dusk the brownies started to dimple. They were equally unselective. Everything was grist for our mill that day, and we felt that at last we were in the expert class. We quit fishing that evening at peace with the world and fly tiers in particular. We drove home without an incident. The gods were smiling.

The sequel to my little tale is a bit sad. We got up again before dawn and had a flat tire before we reached Liberty Road. The carburetor went bad and my friend had a violent toothache. Late in the afternoon (about 2 P.M.) we reached the stream. We were slowly starving. I had left lunch and thermos bottle home in my haste to reach the Utopian fishing grounds. To make a long tale longer, we fished wet, dry and upside down. We fished upstream, downstream and in my "Lady's Chamber." We used nymphs, dry flies, bi-visibles and invisibles. In fact, we used everything but worms and it was tough digging. An eight-inch trout that day would have made history. We caught nothing, period. We saw two other hopefuls on the stream that day and one of them (an old man with a beard) thought he saw a fish flash at his fly after four hours of beating his brains out. He was elated. The other fellow was giving his rod away to a small boy when we came up and said he was going in for gin rummy or pinochle.

The day was nil—a blank. We drove back (or crept back would be appropriate). Our head lights burned out. I stood, like Paul Revere with a flash light on the front fender. We arrived with the mail (it was all unpaid bills).

We both swore off trout fishing, and did—till the following Friday. All of which proves nothing. Or does it? Anyhow, one thing about not catching fish, as the Chinaman said: "No catchee, no cleanee." I used to be nuts about trout fishing, now I'm just nuts—period.—*Md. Rally Sheet.*

A Sonnet

To The Black Bass

The bass beneath the wave strikes hard
and fast
With killing thrust that ends his frightened
prey
Mid foam and whirl throughout the endless day
He foreward drives head-on his wicked blast.
Yet oft by rock or old and sunken log
He lingers long and eyes the watery scene.
In spring-taut rest he watches full serene
As greenish frog and silver fish risk out
the bog.

Driving strength and quiet calm combined
Make rough then smooth his well accustomed role
And prove his piscatorial might supreme.
Power and peace in order intertwined
Meet every foe and take their measured toll
While Nature's God smiles on the balanced
scheme.

—CHARLES REITELL
Former member
Pennsylvania Fish Commission



Joseph J. Johnen of McDonald displays two snapping turtles which he caught on October 18. The larger weighed 15 lbs. while the smaller one tipped the scales at 5 lbs.

The Horsehair Snakes

By CARSTEN AHRENS

Each summer along about August when I was a boy, I'd find that the old wooden watering trough by the barn would suddenly yield strange denizens. We called them the horsehair snakes. They writhed and twisted in snake-like fashion. The dryer the summer, the more thickly populated would be the trough. None of the farmers about believed anything else but that hair from horses' tails fell into the water and "turned" into snakes. No one seemed to doubt this very *obvious* example of spontaneous generation.

For some reason or other I was somewhat skeptical of the "horsehair-plus-water - equals - horsehair - snake" theory. Many were the hairs that I pulled from the tail of uncomplaining Daisy and carefully kept in bottles of water. No hair ever developed into anything alive.

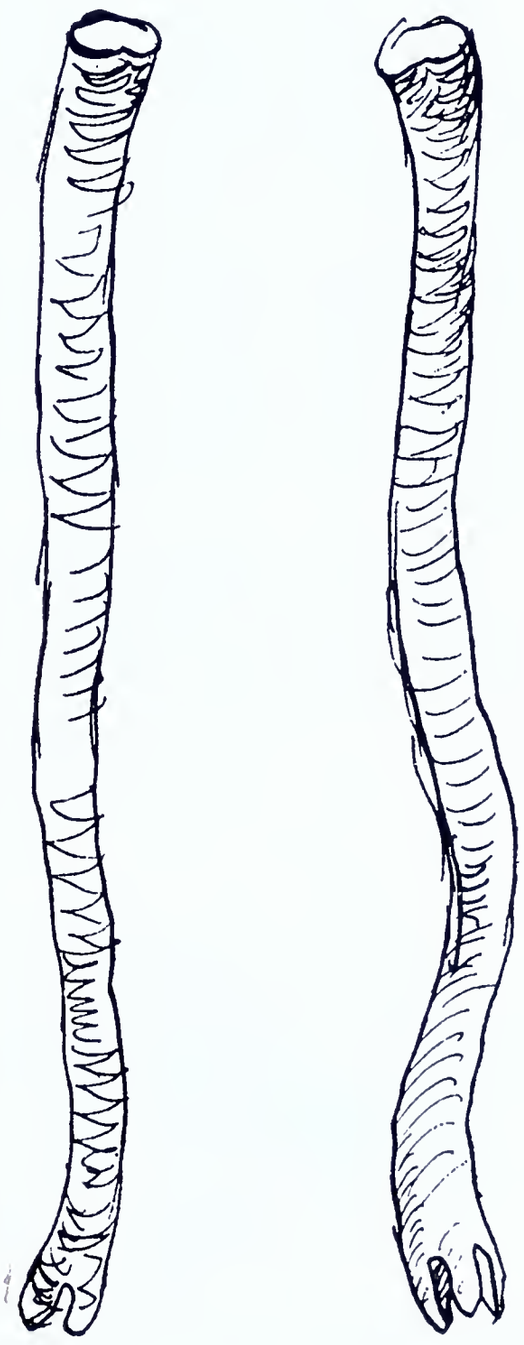
Then when I was about thirteen, I started a cricket orchestra. I used egg boxes and peach netting for the pit; they played for bits of lettuce leaves. But three of my musicians were obviously unhappy. Dissection proved that each poor chap was the uncomfortable host of inches and inches of horsehair snake seemingly endlessly coiled in his abdomen. If these parasites lived in crickets, they could not have been horsehairs, for my musicians were herbivorous.

So the next time I went to the county seat, I visited the library where I learned that I hadn't discovered anything new. I found that T. H. Montgomery had studied the horsehair snakes long before I was born. He knew, too, that they didn't come into being from hairs shed from a horse's tail.

Once, years later, when I was a ranger in Maine, I was walking up a stream in August. There had been a long dry spell, and only a trickle of water flowed down the granite bed from one pot hole to the next. I was attracted to one pot hole that was perhaps a yard across. It was full of horsehair snakes. I reached in and grasped a handful of hundreds of the writhing creatures which I held up to show my companion. We were in a hurry, so I planned to get back as soon as possible to identify the species in the hole. Before I was able to return, however, a hard rain had fallen, the stream was flowing again, and the hole was free of the "snakes."

The horsehair snakes belong to a class of the Round Worms known as Gordiacea. While most of the Round Worms are microscopic, soft, and usually transparent, these are long, slender, and so opaque that they are difficult to study internally. They are like fine wires, black on top and sides and slightly lighter ventrally. The anterior end is rounded. The posterior is often bi- or tri-lobed.

The adults always return to water to deposit their eggs. The newly-hatched larva must find a host inside whose body it will spend its pre-adult life. They have been found as internal parasites in many large-bodied insects like crickets, grasshoppers, and the larger bugs; in spiders, snails, crustaceans, and even in fish. They have been reported even in mammals, but probably the larva were inadvertently taken into the body through carelessness in choice of drinking water. Only the larval form is parasitic. The adult is free living.



Male Female

The Warden Is Your Friend

The phylum of the Round Worms include a great many of man's worse enemies. Among them are the hookworm of the South and the trichina that can be found in almost any uncooked pork. The horsehair snakes are included in this phylum although they are vastly different from their relatives. Some scientists believe them sufficiently different to be in a phylum by themselves. However, the creature isn't a snake. And it isn't a hair from dobbin's tail that chanced to fall into a watering trough and "become alive."

Went Right In Over His Boot Tops

On today's overcrowded trout streams it is usually some unindoctrinated fisherman whose unceremonious splashings disturb your favorite pool, putting the trout down—and keeping them there. They of the "clomp-clomp" of the heavy tread and the "slap-slap" of the flapping boots are the chief enemies of the so-called genteel trouter who has mellowed through the years into a quiet, easy-going part of the landscape, working his stream like a shadow fallen from the trees, unseen by the trout and oftentimes unnoticed even by less skilled fellow anglers.

On the second day of the season, this year, I was fishing a promising looking stream in Crawford county for the first time. It was so cold that ice continually formed in the line guides and on the line itself, and this had to be chipped off with the fingertails after each few casts.

Despite the cold, one of these boot-flapping cowboys had his waders at half mast during the walk from his car to the pool in which he wanted to fish. Now I had already been in possession of the pool for at least ten minutes, slowly making my way along its side to work what looked like the best waters in that particular section of the stream.

It was one of those spots we dream about all winter. The tail of the pool forced the water through a narrow neck of rock, spilling a falls into another pool which gradually deepened as it widened. Evidence of the multiple eddies and backwaters swirled on its surface. Although you couldn't see the trout, nevertheless you could count the spots on their sides.

Well, this "character" became so intent on forgetting the ethics of trout fishing and on beating me into the best location from which to fish the attractive looking water, that he splashed right in over his boot tops.

"Hey," cried Satan to the new arrival. "You act as if you own the place."

"I do," came the reply, "My wife gave it to me before I came."

Sailor: "I can't marry you. We have nothing in common. Why you wouldn't even know port from starboard."

Girl: "Well, I could look at the label on the bottle, couldn't I?"

For the Outboard Motor Owner

Small Boating Tips

Although outboards aren't temperamental and smallboats demand little attention, simple daily maintenance of boat and motor can assure a full season of boating fun.

An outboard motor works harder than an automobile engine because it usually operates at two-thirds throttle, or more, without a let up. Correct lubrication—the right type of oil in the correct quantity—is essential to its long life. The motor manufacturer's recommendations should be strictly followed in proportioning gas to oil; too much oil leaves deposits on the spark plug terminals and may cause the motor to miss or stop—too little oil causes undue wear on pistons, cylinders and cylinder walls and can cause the motor to overheat. The correct proportion of gas and oil, as stipulated by the manufacturer on the instruction sticker attached to the motor, should be thoroughly mixed in an outside container before being poured into the fuel tank.

Since the lower assembly of an outboard motor is under water when the motor is operating, moisture will tend to leak into the gear case housing when not adequately filled with grease. Such moisture can eventually corrode gears, bearings, and shafts. Moisture can be prevented from leaking in if fresh grease is regularly forced into the gear case housing through the grease plug opening until it oozes out of the vent opening. Only outboard greases of the type recommended by the outboard motor manufacturer should be used.

Outfitting the motor with new spark plugs at the beginning of the season is repaid later in time and effort saved when old and corroded plugs may cause hard starting.

Controls should be tight enough to hold at any desired setting. The spark control lever can be made to hold by lightly turning the screw that is situated beneath the base of the lever. Carburetor controls can be tightened by turning the nut located where the needle enters the carburetor body (models that do not have a nut at this point need to be replaced with needle valves when the carburetor control becomes loose). Care should be taken when tightening any controls since overtightening causes excessive wear on bearings.

It's a good idea to carry an adjustable wrench, spare spark plugs, a screwdriver, pliers, and a length of wire in the boat at all times. They may never be needed, but may sometime mean the difference between an enjoyable day of fishing, or a day spent in hunting a repair man. Tools and parts can be kept handy and together if kept in a small sack tied to a rib in the boat.

The hull should be washed frequently with fresh water and a sponge to remove accumulations of dirt, grime, and marine growth. For an extra thorough cleaning, mild scouring powder can be used on painted hulls. Glossy varnished or enameled hulls should be wiped off with a damp cheesecloth or with a cleaning compound designed for these types of finishes.

Many outboard motors are needlessly lost overboard each season due to carelessness. Motors occasionally slip out of grasp when attached to a boat, and if not properly fastened to the stern, very often creep off when the boat is swung about suddenly.

Such losses can be prevented by securing the motor to the boat with a length of chain before it is attached and left chained until detached. A ½" link chain should be harnessed with snaps at either end. The chain is then slipped through the opening between the stern bracket and the lower unit of the motor, and through the space between a knee and the transom of the boat and the snaps clipped together.

Motors used in salt water collect scale in the water jackets although the tendency to do so has been greatly reduced in recent years by treatment of the metal parts in the manufacturing process. Motors used in salt water should, however, be regularly run in a tank of fresh water. A garden hose can, instead, be held against the water intake provided care is taken not to apply water to the exhaust.



Here Henry Pancheri of Glen Falls, Pa. displays two nice large-mouth bass which he caught in Saxes Pond, Sullivan County. The largest of the two measured 22½" long while the other one measured 20¼". The bass were taken on a flat fish plug.



"But dear, most wives like to go fishing with their husbands."

Courtesy and regard for others is imperative in maintaining the camaraderie which exists on the waterways. Swimmers, fishermen, and other boaters are always given as wide a berth as possible. When it is necessary to pass close to them, the motor should be throttled down. Manufacturers have done their part in bringing to the outboarder a motor that is next to noiseless when used with the mufflers and underwater exhausts provided. Boaters should cooperate by using their motors only when so equipped and by repairing defective mufflers.

The Outboard Boating Club of America, largest organized group of boaters in the country, urges all boaters to make the season more enjoyable for others as well as for themselves by participating in the campaign for common sense afloat and water courtesy. Common sense afloat distinguishes veterans from novice boaters. Never overload or overpower a boat—know and heed weather signs—never change seats or stand up in a moving boat—respect fishermen, swimmers, other boaters. Recently, the club published a folder highlighting water courtesy and common sense boating, featuring "Lem Lubber," the cartoon character familiar to boaters everywhere who does everything wrong when he goes boating. The folder is free from OBC at 307 N. Michigan Ave., Chicago.

Hooking Hellgrammites

By DON SHINER

The two best ways of hooking hellgrammites is under the collar or through the tail. Depending on how bass are taking the "creeper;" one method may be superior for that particular time.

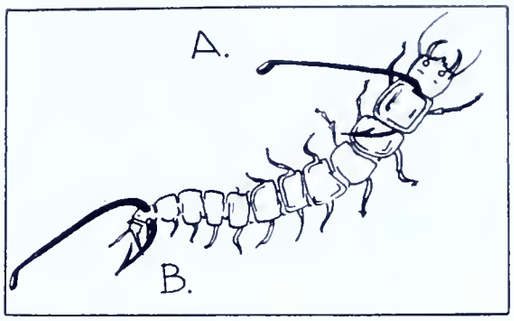
Bass generally grab the hellgramite lightly and run sometimes considerable distances before stopping to swallow the prize. This can be compared to a chicken, upon finding some choice food, picks it up and runs some distance from the rest of the flock so that it can enjoy the tasty food in solitude or to prevent another chicken from stealing it. This is similar to the bass characteristic of running with the bait.

Usually at the end of the run, the hellgrammite, minnow, crab, or other bait, is turned and then swallowed head first. Hooking the hellgrammite under the collar is best then as when it decides to turn the creeper and swallow it, the head, collar and hook goes down the "hatch" first.

However, often the bass are playful and after grabbing the hellgrammite lightly and running some distance, they spit out or allow the creeper to go free. Invariably the angler generally misses the bass if he tries to set the hook at this time or during the run. Hooking the creeper through the tail sometimes remedies this and a playful bass can be hooked as it runs with the bait.

Setting the hook in a striking bass has always been more or less guess work. This, however, may add to the enjoyment in bait fishing for the bronzebacks, as it is generally a guess whether the run will net a blank or a bass.

Try both methods of hooking hellgrammites and your chances of success is always increased. Then again, a possible third method of hooking these insects is by turning the creeper inside out. This is accomplished by tearing the head and collar from the body, and placing the point of the hook at the tail. The creeper is then easily turned inside out as it slips around the bend and up the shank of the hook. This causes the bait to have a whitish cast and appears to be a totally different insect. Just what it represents to a bass I will refrain from saying. It could be a water nymph, dragon fly or some water worm. At any rate, it works on bass as well as trout, pan fish, and large chubs. Once any hellgrammites die while in your possession, it would be far better to use them "inside out" rather than destroy or discard them.



It takes seven years for a hellgrammite to mature. Streams can be easily depleted of hellgrammites if they are hunted too hard. So it is better to use a few properly or "inside out" if they die while in the bait can.

Use Your Imagination and Have Fun

(*Turn to Page 3*)

the size which they did. However, the real mystery was how they managed to elude us in all the years we fished there. It seems almost unreasonable to think that they had never met up with any of the many forms of live bait with which we regaled the perch.

Later, Burr declared that the pond looked "bassy" to him. "It's reasonable to assume," he continued, "that a species will live in a place suitable for it until it is proved otherwise."

"But why should you have been the one to have had the notion that there were bass in there?" Bill asked with no little suspicion.

"Well, pal, I'd tell you except that anyone without any imagination wouldn't understand."

We haven't fished the pond since that memorable evening simply because the farmer who owns it used too much imagination. After doubling its size he stocked it with oversize catfish, a twenty-pound sturgeon as well as with sundry other species. Now he charges a fishing fee and gives prizes to those of his patrons catching the largest fish. Imagine!

Louis W. Stevenson

in the Wellsboro Gazette

One day in April I was fishing on Lyman Run, in Potter county, when I met another fisherman. As is usually the case among fishermen, we stopped to greet each other, compare catches and to discuss topics of interest and our conversation got around to conservation in general. I learned that the other fisherman was Larry Blaney, a high school instructor in the Aliquippa High School. I learned further that Larry was deeply interested in teaching outdoor conservation to young people, so much so, that last year he established a fishing club to help students in the Aliquippa schools organize fishing trips.

Since that chance meeting on Lyman Run, I have learned more about Larry Blaney and how he devotes a great portion of his time to teaching conservation to young people. I have read a letter of his, written to Johnny Mock, editor of "All Outdoors" of the Pittsburgh Press and two paragraphs of that letter explain Larry's philosophy better than I can possibly express it in my own words. The following words are those of a sportsman who practices what he preaches:

"I guess we are Voices crying in the wilderness and like you, I too get hoarse as hell! Yet, what is the answer? It is my firm conviction, Johnny, that our young kiddies (God bless 'em) are our salvation. But they need so much help. There are so few who are willing to assume the role of being my brother's keeper. If not these young 'uns, then I hate like hell to face what we both know must be the inevitable and I'm not taking that without a battle!"

"During our Christmas recess, I spoke to one of our high school service clubs at their annual banquet. The theme of my address was most naturally Conservation and Service. I developed the entire theme of my talk these four words: "To think, to know, to do and to appreciate." You can kick these around anyway you wish and the meat is still there, paralleling our philosophies very nicely."

Last year Blaney and Sam Harris, chairman, Educational Committee, St. Louis Bait and Fly Casting Club, St. Louis, Missouri, compiled a list of responsibilities of a fisherman. They too are so much to the point that they are given herewith:

YOUR RESPONSIBILITIES

(1) Know (be able to identify the various game fish).

(2) Master the principles of fly and bait-casting.

(3) Learn stream and lake fishing tactics.

(4) Fish with artificial rather than live bait; removal of the latter robs fish of their natural food.

(5) Know and observe the state fishing laws.

(6) Learn, practice and teach conservation so that the high school boys and girls of tomorrow may enjoy the sport that is yours today.

(7) If you would catch more fish, kill less. Don't be a fish hog.

(8) Destroy all predators.

(9) On stream or lake, be a gentleman.

(10) To become a sportsman you must be a good sport.

(11) Always respect the rights of others.

(12) Fish for the pleasure that fishing provides, not to see how many fish you can take.

(13) Don't destroy trees, shrubbery, or cover along the stream.

(14) Respect the rights and property along the stream.

(15) Practice being a good citizen.

(16) Remember that a gentleman is a fisherman, a fisherman is always a gentleman.

Springtime is Time for Boaters to Preserve Their Equipment

Painting heads the list of spring boat conditioning plans, since almost every smallboat owner looks forward to getting out the paint brushes and making his boat trim and shipshape for the season.

Start the process by giving your boat a general washing with hot water and cleaning powder—both the inside and outside of the hull. Scrub off the accumulation of dirt and grime and flush the hull with clean water. Remove all the metal fittings and examine the hull to determine the amount of work necessary. The hardware should be tagged and set aside until it is ready to be replaced.

Check the hull thoroughly for cracks or injured spots, since all repairs should be made now and not put off until the boat is refinished and the season has progressed. What is a minor repair at this date may develop into something more serious. If the paint or varnish has not checked, blistered, or peeled badly, you will only have to sand the hull and apply new paint. If the old paint is bad remove all the finish first.

Assemble all the materials and tools that you will need to repair and refinish before beginning either task. Marine glue thinned with turpentine, and applied with an oil can will close minor cracks or seams. Nail or screw holes may be filled with marine putty, and sanded over when dry. Varnish remover and a good flexible putty knife will take off the old paint—experts use a blow torch, but in any case don't use both. Steel wool is useful in removing the last bit of paint missed by the putty knife. Last, get the best marine paint available. The average outboard will only take three pints, so the cost is small compared with the beauty and protection that superior paint will provide for a full season.

Sand the boat carefully so that new paint will lay on smoothly. Dust the surface before starting, and wipe it with a rag soaked in turpentine. Don't put the paint on too heavily but work it into the wood with your brush. Sand the first coat lightly with fine sandpaper or steel wool before applying the second. In the case of a mahogany, or similar finish—a soft wood filler matching the color of the wood should be applied. As soon as it begins to set, wipe across the grain with clean burlap, sand when dry and coat with clear spar varnish. Several coats are necessary.

Anti-fouling paint is necessary to protect hull bottoms in salt water. Smallboat owners will want to use a hard rather than the soft finish paint since their craft are beached frequently. This paint will give the necessary high polish surface and still be effective against all marine growth.

Expert boat maintenance men estimate that the life of a boat receiving proper care is three times longer than a neglected boat. So paint it and preserve it—invest now in guaranteeing future boating fun.

The secretary quit her job, because her boss drank Scotch every afternoon, and then would wanna' chaser.

Some guys are funny. Like the one who didn't kiss his wife for five years—but shot a man who did.

Man Against Trout—Or Vice-Versa

By Bill Walsh

Becouse trout fishing is so much more than the mere taking of fish with a rod and line, and because the aesthetic values of just "walking" a trout stream are so many and varied, today's story is devoted entirely to the gentle art of transferring trout from the water into one's creel—and the many side issues thereto.

A day on a trout stream is not (at least to the memory) a period of time into which are sandwiched a given number of hours, each in turn jammed with so many minutes, again crowded with a certain unchangeable number of seconds. It is measured by the rising of the sun in the morning and the falling of the shadows in the evening. It begins in a twilight and ends in a twilight —and the last cast can be as magical as the first in anticipation and in results.

A day of trout fishing is seemingly without time. One is not harried by doorbells, telephones, appointments, time clocks, noontime whistles, traffic lights, singing commercials news of war and threats of war.

It is an ideal time in which modern man—the tender of machines, the moulder of metals, the director of far-flung enterprises—can again renew the old contacts with the earth, the forest, the hills, the stream, and all the old surroundings from which he has raised himself. He can return to original sources and again be one man—armed with his wits and his lures—against the cleverness and the wariness of the trout in the pool.

Only this time he doesn't need the trout. It's the sport he's interested in now—and the thrill is even greater, perhaps, than that experienced by the real "old timer" who netted or speared fish because there was a gnawing hunger in his stomach. The pastime has been refined together with the man.

Form 3526
Rev. 7-46

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946

Of Pennsylvania Angler (Insert title of publication) published Monthly (State frequency of issue)

at Harrisburg, Pa. (Name of post office and State where publication is entered) for October, 19 49

STATE OF Pennsylvania }
COUNTY OF Dauphin } ss.

Before me, a ____ in and for the State and county aforesaid, personally appeared J. Allen Barrett, who, having been duly sworn according to law, deposes and says that he is the Editor (State whether editor, publisher, business manager, or owner) of the Pennsylvania Angler (Insert title of publication) and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily, weekly, semiweekly or triweekly newspaper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (section 537, Postal Laws and Regulations), printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

	Name of—	*Post office address—*
Publisher	Pennsylvania Fish Commission	Harrisburg, Pa.
Editor	J. Allen Barrett	Harrisburg, Pa.
Managing editor		
Business manager		

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Commonwealth of Pennsylvania Fish Commission	South Office Building Harrisburg, Pa.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

None

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is ____ (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

J. Allen Barrett (Signature of editor, publisher, business manager, or owner)

Sworn to and subscribed before me this 5th day of October, 19 49

[SEAL] Mary J. Mussina NOTARY PUBLIC

(My commission expires ____, 19 ____)

My Commission Expires March 6, 1950

NOTE.—This statement must be made in duplicate and both copies delivered by the publisher to the postmaster, who shall send one copy to the Third Assistant Postmaster General, Division of Newspaper and Periodical Mail, Washington 25, D. C., and retain the other in the files of the post office. The publisher must publish a copy of this statement in the second issue printed next after its filing.

POSTMASTER: BE SURE TO READ AND CAREFULLY OBSERVE INSTRUCTIONS ON THE OTHER SIDE 16—18720-2

ALL SOURCES OF STREAM POLLUTION MUST STOP!

A comprehensive survey of all the streams in the State of Pennsylvania to determine every source of pollution will be made by the Bureau of Engineering, State Department of Health at the direction of the Sanitary Water Board under the intensive Clean Streams program being advanced in every area of Pennsylvania.

The work will be carried out by a specially organized unit with an appropriation of approximately $10,000 from the Federal Government. That sum, in addition to some $24,000 which is being devoted to a study of the effects of industrial wastes upon fish life, has been alloted to Pennsylvania from funds set up by Congress under the Federal anti-pollution law, for scientific study and for the collection of pertinent data relating to the program to abate pollution of the streams.

Vast amount of data relating to sources of pollution have been gathered in the past by the Bureau of Engineering and this information is being added to the rapidly advancing Clean Streams program. Many sources of pollution throughout the State have been and are being cleaned up through installation of waste treatment systems. However, the survey to be made will definitely establish all sources of pollution on all the waterways which will facilitate the anti-pollution drive in that it will reveal the pollutions of smaller volume which can be determined only by a concerted survey.

Orders have gone out to five additional coal mine operators by the Secretary of Health and Chairman of the Sanitary Water Board to cease discharge of any mine drainage to the public waterways until they have received a permit from the Board, a requirement under the Clean Streams program. The order also states that the opening or reopening of a coal mine without a permit from the Board is contrary to law and continuation of operations will render the violator liable to the penalties provided by law.

Those receiving the latest orders are L. D. Stitt & E. Clinton Stitt, Kittanning, deep mine in Rayburn Township, Armstrong Co.; Merritt Coal Co., Castle Shannon, strip mine, Baldwin Township, Allegheny Co., W. H. Reitler, Vintondale, deep mine in Jackson Township, Cambria Co.; Woodland Coal Co., Rimersburg, deep mine in Red Bank Township, Clarion Co.; Ren Coal Co., New Castle, strip mine in Washington Township, Lawrence Co.

THE

Pennsylvania Angler

wishes you

A

REAL OLD FASHIONED

Christmas

AND

A HAPPY and SUCCESSFUL

New Year